

AN INVESTIGATION OF STUDENT
KNOWLEDGE AND ATTITUDES TOWARD
BLINDNESS AS A FUNCTION OF
KNOWLEDGE AND EXPERIENCE.

WILSON ROBERT ALLEN.

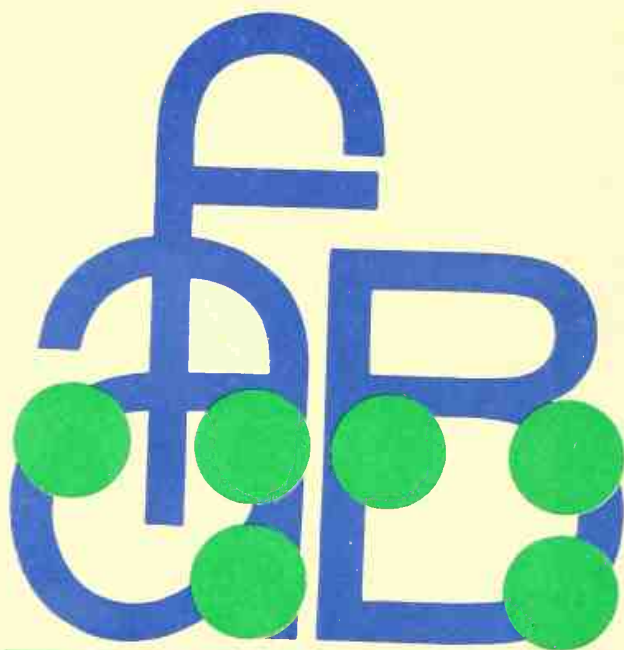
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BLINDNESS AS A FUNCTION OF KNOWLEDGE AND EXPERIENCE

A DISSERTATION
Submitted to the Faculty of The
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Of the Catholic University of America
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For the Degree
Doctor of Philosophy

by
Robert A. Wilson

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This dissertation was approved by Hart M. Nelson
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AN INVESTIGATION OF STUDENT KNOWLEDGE AND ATTITUDES TOWARD
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ABSTRACT

The Problem: This research focused attention upon curriculum differentia, and personal experiences evaluating their impact upon the attitudes and knowledge of special education students toward blindness. Socio-economic variables as well as prior life experiences were examined for their role in attitude formation and change.

Procedure and Methods: The population was derived from five schools having special education departments (numbering 252 beginning and 182 graduating students). The acquisition of the five schools was through a purposive sample predicated on the exposure in curriculum and practicum concerning blindness. Data was acquired through a self-administered questionnaire which included a personal data sheet, knowledge inventory, semantic differential, and a pupil preference rating scale. Between and within group comparisons were computed with respect to knowledge levels, attitudes about blindness, and preferences for working with the blind. The relationships between knowledge beliefs and behavioral tendencies were also analyzed.

Results: Six hypotheses were tested concerning the cognitions and beliefs of beginning students, the relationships of socio-economic variables to cognitions and beliefs, as well as the change in cognitions and beliefs resulting from the differences in the graduate school experience. The major findings follow:

1. Students with no direct contact with blind persons exhibit moderately favorable attitudes on the semantic differential, moderately unfavorable action tendencies, and limited knowledge.

2. Students vary considerably in their level of knowledge, but as a group share many misconceptions about the nature and scope of the problem and the capacities of the blind to profit from special education help. Their general image of the blind seems based on a specific and unique type of personality, such as a cultural hero.

3. Students with specific life experiences are not significantly different from each other and the general population. On the personal life experience, those with blind immediate family members rank high on the semantic differential. Those with blind family members and close friends also prefer to work with the blind more than those whose contact was on a minimal emotive level.

4. Those students who had personal contact with the blind received significantly higher knowledge scores.

5. The impact of socio-economic variables on cognition and preferential ranking were generally not significant, except for presence of children and the mother's education.

6. Graduating students show a trend toward more negative semantic ratings than beginning students. Comparisons between schools show a significant difference.

7. The general body of graduating students (practicum students excluded) is not superior to beginning students in their knowledge about blindness and share similar misconceptions.

8. Changes in client preference occur as frequently among

students in high as they do in low exposure schools, but the rank order remains stable.

9. Students in practicum placements serving primarily blind pupils are significantly superior in knowledge about blindness, and demonstrate greater changes in attitudes and greater extremes in pupil preference ranking. The quality of the educational placement and practicum supervisor are determinants of the direction of attitude change.

10. Practicum students share a common, high level of knowledge and exhibit distinct likeness with similarly placed students in the same school in their rankings of the blind as a preferred pupil group.

Conclusions: The research in this project strongly supports that cognitions, feelings, and action tendencies are not consistently related except at the extreme ends of the attitude continuum. Knowledge gained from experiences with the blind, particularly on an emotive level, makes a greater impact on attitude formation than the cognitions derived from a general curriculum experience. The sources become further reference points for the evaluation of new cognitions and their integration within attitude structures.

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Robert A. Wilson

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CHAPTER I

INTRODUCTION

Historical Background

Within the historical development of society, three periods appear most evident concerning the social interaction of the sighted with the blind: (1) intolerance, (2) humanism, and (3) integration.¹ These periods are primarily defined through the perception of and treatment afforded the sightless.²

Period of Intolerance

The first period may be categorized by the emphasis on intolerance, and at times, gross intolerance. Primitive people, whose interaction with each other and whose perception of illness was predicated on a superstitious relationship with forces or gods, saw blindness as an omen that might prophesy destruction of their society, or disfavor at the very best. As a result, the sightless child was usually destroyed, and if not destroyed as a baby, his chances for survival were severely limited. While some references in early

¹Berthold Lowenfeld, "The Education of the Blind in Public Schools," Outlook for the Blind, XXXV (October, 1941), 169.

²Ras Mohun Halder, Society and the Visually Handicapped (London: Marshall Press, 1948), p. 12.

records from Egypt and India allude to compassion, the focus at the most was pity and the lot of the blind was a sad one. As low as our concept of begging might be, it was considered an advancement when offered to the sightless some years later.

On what we today term the negative side, the blind were treated in different ways during the early development of the civilizations of Greece and Rome. In the market places of Rome, baskets were sold in which blind or crippled children could be placed and then laid at the side of the Tiber River to perish. In Greece a similar practice was observed where the child was taken into the wilderness, put in a pot, and left to be devoured by wild beasts. One might ponder the fate of modern literature if the parents of Homer had held to this basic belief about sightlessness. The Illiad and Odessey would not exist today.³

Some anthropologists have discovered in primitive societies a marked respect for the peculiar, or as in this case, the sightless. Since they were imputed to have certain particular abilities, such as insight into the soul and the capacity to deal with the powers of darkness, they were accorded the status of Shaman. In early Rome, the sightless were used to lead people across certain areas of the city when darkness or heavy fog set in. Others actually led persons across deserts and other unmarked areas. In some cases their memories were developed as depositories for the lore and literature of

³Edward Jablonski, "Man's Conquest of Blindness," American Legion Magazine, LXXIX (December, 1965), 21.

their country.⁴

Both ancients and moderns looked upon blindness as a divine visitation or affliction, and the question was queried, "Who did sin, this man, or his parents, that he was born blind?"⁵ The great multitude of those who were without sight had no substantial income, no security, were estranged from their family and society, and led a life of loneliness and wandering. Through the Middle Ages they were known as a scourge in both Europe and Asia.

Ideas and concepts that are held by the general populous greatly affect the treatment of those who are sightless. At the time of the establishment of the great religious philosophies and ideas, blindness was one of the handicaps with which theologians had to deal. The early sacred writings list various infirmities, four of which are deafness, dumbness, lameness, and blindness. Although these were all considered relatively severe, blindness was the least to be desired and was looked upon as the most negating of human experiences. This attitude persists in modern society and many of the people in the social sciences still consider the blind the least desirable group with which to work.

Humanitarian concerns are early noted in the Bible, which is regarded as one of the earliest records of man's compassion towards his injured fellow. An ancient Hebrew scholar declared in the Midrish,

⁴Harry Best, Blindness and the Blind in the United States (New York: Macmillan and Co., 1934), pp. 299-300.

⁵John 9:2, King James Version.

"The blind man is as one dead."⁶ This statement heralds the beginning of Christian Hebraic charity. The Hebraic idea that a child was a priceless gift of procreation from God gave human existence a sacred and divine aura and shattered many of the superstitions concerning infirmity and crippleness.

The blind were the recipients of benevolent legislation during the time of ancient Israel. The sacred literature gave force to its concern for the blind by negative injunctions such as: "Thou shalt not . . . put a stumbling-block before the blind,"⁷ and "Cursed be he that maketh the blind to wander out of the way."⁸ In spite of this philosophy of compassion, there still was no concerted effort to help the sightless and the seeds of education had not yet begun to bloom.

One observes little left but begging as an occupational goal. Though begging is today considered demeaning, it was then an acceptable occupation permitting the sighted to express compassion. In fact, the best places for begging were allocated to the blind by common consent. Yet even at these preferred places, the wayside, doors of the temples, and gates of the cities, begging was a precarious existence. It was obvious that society still considered blindness as severely crippling a person's ability and capacity to exchange his services for goods produced by the society. The New

⁶Jablonski, op. cit., p. 19.

⁷Leviticus 19:14, King James Version.

⁸Deuteronomy 27:18, King James Version.

Testament, however, progresses to the point of stating a positive injunction which insinuated a new objective. Blind Bartimaeus did not consider alms for his food and material gain as his basic need, but extended beyond these and requested his Master Jesus to give him sight.⁹ This was the cry of the blind and probably symbolizes the continued advancement toward education.

One author considers the Christian era as the basic impetus changing attitudes toward the sightless.¹⁰ The compassion of the churches was real, and they directed a lively interest, even to the extending of a more substantial and material type of aid. In various monasteries and hospitals the blind discovered care, heightened and activated by religious concern. During this era, the church found itself directly involved in the alleviation of various hindrances and lack of security.

Period of Humanism

The period of intolerance passed to be taken over in part by the Christian era which pushed much of the conceptual concern about blindness into what we would term a period of humanism. This concept of humanism became the accepted philosophy concerning sightlessness, and the very basic rights to live and to be protected were extended to the blind.

The most manifest example of humanism is seen in the life of

⁹ Mark 10:46-52, King James Version.

¹⁰ Best, op. cit., p. 302.

John Milton, who was blinded in 1652 at the very height of his literary career. In complete darkness until his death in 1674, he produced such masterpieces as Pardise Lost, Paradise Regained, and Samson Agonistes.¹¹ These immortal masterpieces declared that he not only had a right to live and be protected, but that he maintained the respectable capacity to contribute to world literature. His philosophy stands today as a modern monument and can be utilized to incorporate the handicapped and crippled of all ages. "They also serve who only stand and wait," he said in the last line of his sonnet "On His Blindness."¹²

It becomes obvious that one should be reckoned according to his capacity to serve and to give, not on a prejudicial evaluation of his limitations. The impact of the Christian era, even on hard, practical Rome, caused the lessening of disdain toward the blind.¹³ Blind boys in Rome were instructed as rowers and the use of their physical prowess was encouraged in many cases. Nevertheless, the female counterpart as a minority group was relegated to an unfortunate life of prostitution. This, even in our modern lifetime, has been the fate of many a sightless girl in the Orient.

The period of humanism saw blindness slowly evolving as an impinging factor on the conscience of society. Discussions of the

¹¹William J. Long, English Literature (London: Ginn and Co., 1948), pp. 208-209.

¹²Ibid.

¹³Best, op. cit., p. 303.

philosophers indicated that, whether a person was blind or not, his social rights were held as self-evident and his economic possibilities could be expanded and exploited. This engendered a type of sympathy which stimulated a desire to ameliorate conditions of the sightless.¹⁴

As the discussion concerning the blind person's abilities and capacities became more frequent and evident, the process of individual concern and identification was stimulated. A fear was noticed among the sighted, not of the blind population, but that they themselves might go blind.¹⁵ It is obvious here that one's want satisfaction is a stimulant factor in the change of attitude towards the sightless. This urge to help is with us all, and it takes diverse modes in its expression.

Through the process of education the blind were able to develop their capacities and be accepted in the society as having a personal dignity and integrity. Some historians feel that basic instruction was given as far back as 1178, when Duke Welf VII of Bavaria created a home for the blind.

One of the most auspicious institutions developed up to this time was originated in 1254 and was called Hospice des Quinze-Vingts. It was developed by Louis IX, who was later called St. Louis. The "Congregation of the Three Hundred" was organized as a gesture to some three hundred crusaders who were blinded through the sadistic pleasure of a Turkish Sultan. This was a lay brotherhood who were

¹⁴Jablonski, op. cit., p. 36.

¹⁵Gabriel Farrell, The Story of Blindness (Cambridge, Massachusetts: Harvard University Press, 1956), p. 4.

given over to religious works, and had privileges, such as freedom from taxation and the right of refuge, granted them. After some time almost any blind person could seek refuge in the walls of the Quinze-Vingt and "Sainte Terre" became the cry even of those who had not been to the Holy Land. This brotherhood captured the romantic imagination of many, and even the very wealthy sought to be buried within its walls. Though this was a beginning and did not serve as a complete solution, it did bring into graphic focus much of the philanthropic desire felt by some of the monarchs and leaders who desired to give of themselves. A cause was made and was spread abroad through many similar brotherhoods.¹⁶

The state began to participate in social welfare and in the protection of the rights of those who were without sight. During this period we observe scanty attempts to instruct the blind. At times gifted individuals offered their teaching skills to the schools for blind children. At other times, school administrations were so desperate for staff that they pressed into service local citizens with or without a background education.¹⁷ Educational processes appeared as the major ladder for the blind to climb from their pit of desperation.

There dawned a new day as the sixteenth century was reached, for educational attempts became more frequent and evident.¹⁸

¹⁶Jablonski, op. cit., p. 36.

¹⁷Jeanne R. Kenmore, "Educating Teachers for Blind Children," New Outlook for the Blind, LIV (May, 1960), 165-167.

¹⁸Best, op. cit., p. 304.

Physicians had always to deal with the sightless, and one of the first real attempts to instruct them was by a physician, Girolimo Cardana of Pavia, Italy, who had previously worked with the deaf. In coming in contact with the blind he queried as to whether or not through embossing of some type of print he could not communicate knowledge? Peter Pontanus, blinded in his youth, published a book concerning the blind and their instruction. In Italy an anonymous publication appeared in 1646 by the title "Il Cieco Afflito e Consolato." In France it was called "L'Avenugle Afflige Et Console." In 1670 another treatise concerning the sightless was written by Padre Lana Terzi, of Brescia, who also had written about the deaf, and had come into contact with the handicap of blindness. Another writer during the eighteenth century in Switzerland, was Jacques Bernouilli, who wrote a book on the teaching of mathematics.

Before formal education could be offered, the speculation as to the intelligence, or the basic capacity of the sightless to learn, had to be clarified. This took place among the philosophers of the day and again by the physicians who were most aware of the physical dimensions of blindness. One of the greatest examples of the speculators of that time was a philosopher encyclopedist, Diderot. He adroitly made obvious the question of the psychological aspects of blindness when he wrote Letter on the Blind for the Use of Those Who See, published in Paris in 1749. Diderot first advanced the opinion that the senses of the blind were not especially sharpened by the loss

¹⁸Best, op. cit., p. 304.

of sight, nor was there really a sixth sense in this respect; second, that education should be built on what the blind have, rather than what they have lost; and third, that the blind at all costs should be kept up as much as possible in activity with the objective world about them. This foreshadowed the modern concepts of integration of the blind into society. The thinking of the savants of the day was stimulated, for after all, did not Diderot have an erudite pen?¹⁹

Another effect of the letter was that it crystalized speculation about blindness. "True," wrote Michael Anagnos, "Diderot was the first writer who called attention to the condition and wants of this afflicted class, and made them popularly known, but neither he, nor . . . any of the encyclopedists, went beyond the boundaries of abstract psychological speculation, they proposed no measures of practical utility or relief. . . ."²⁰ The real work for the blind commences with Valentine Haüy. This man was the one to evolve the embossed type and to actualize the thesis of Rousseau concerning education. A gaping, smirking crowd using blind men as amusement, stimulated Valentine Haüy toward a new mode of education for them. This incident took place in 1771 at the market of St. Ovide in Paris, which was considered "the intellectual center of all of Europe."²¹ Haüy's basic philosophy was that the blind should not beg or be put on

¹⁹ Denis Diderot, Early Philosophical Works, trans. by Margaret Jourdain (Chicago: Open Court Publishers, 1916).

²⁰ Farrell, op. cit., p. 3.

²¹ Jablonski, op. cit., p. 38.

public display, but that they should be taught and educated in a manner which would enable them to become a functioning part of society and to produce acceptable work.

Le Societe Philanthropique entrusted twelve students to the first school which was named L'Institution Nationale des Jeunes Aveugles. In 1787 Haüy published his Essai Sur l'Education in des Jeunes Aveugles.²² After the outbreak of the revolution in 1791, the school was taken over by the state and set up as a public institution.

Other countries of Europe were encouraged to set up similar institutions after the inauguration of this program in France.²³ Britain was the first to develop an extensive program. The work, which had a solid foundation in France, Britain, and the European countries, was passed on to America in the late 1830's. Persons with diverse philanthropic interests, and especially the field of education, began the work with the blind. Evidently, the whole concept of amelioration of the nation's ills by education had set America ready to accept the educational process. The sociologist, Lester Frank Ward, was extremely interested in amelioration of problems through education, no matter what the person's handicap appeared to be.²⁴

²²Valentin Haüy, Essai Sur l'Education in des Jeunes Aveugles (Paris: 1787).

²³Berthold Lowenfeld, "History and Development of Specialized Education for the Blind," Outlook for the Blind, L (December, 1956), 401-408.

²⁴Lester Frank Ward, Dynamic Sociology (2nd ed.; New York: D. Appleton and Co., 1911), pp. I, xxvii.

Period of Integration

A unique period of integration was developing in America which was built on the humanistic right to live. This was extended more fully to the blind as well as the right to be educated, trained, and more fully integrated into functional society. We could characterize this period by its manifold activities in behalf of the blind, both for and with them. These activities were aimed towards helping them achieve normalcy as functioning members of society.

It is important to note the inclusion of governmental participation in dealing with people blinded during the times of war. The responsibility of the government was a great stimulant towards educating the sightless and organizing a rehabilitation program. For a while after a war, the blind person was a returning hero and great compassion and physical goods were literally showered upon him. Except for the fact that he was allowed preferred treatment in the use of hospitals, governmental monies, vocational aid, and educational encouragement, he soon became just another blind person.

The history of provision for the war-blind in the United States dates to its very beginning as a nation.²⁵ As far back as 1636 the Pilgrim Courts gave special attention to the maimed. Other states, such as Virginia and Maryland, passed similar acts during this century that were not quite as generous. The first national disability law was passed in 1776 by the Continental Congress. Blindness, as a specific cause for pension, was first recognized in 1864. The

²⁵Farrell, op. cit., p. 24.

financial remuneration was gradually increased after the Spanish-American War and at this day stands as a substantial income for those who are 100 percent blinded during a war.

Medical progress in the field of blindness has been phenomenal. From 1851, when Hermann von Helmholtz invented the ophthalmoscope, to the present, treatment for eye diseases as well as preventive techniques have been discovered and applied. More information on medical progress in the area of blindness may be obtained from sources footnoted here.²⁶

The different processes were not set up for their rehabilitation. During this time, we find a real concern for the discovery of the causation and prevention of blindness. Focus was placed upon the education of both school and pre-school children and post-school adults. Societies, agencies, and organizations were formulated to accomplish these set purposes. They stimulated and instituted after-care placement, and encouraged general well-being.

With a new consciousness of their own worth, the twentieth century blind started self-help federations whose objectives were to give help to the blind, to stimulate new forms and modes of rehabilitation and education, and to develop knowledge communication about the blind.²⁷ However, the basic indicator of social acceptance on all levels was still within the field of production and occupational

²⁶Jablonski, op. cit., p. 39.

²⁷Bruno Schultz, "The Blind in Modern Society," New Beacon, LI (February, 1967), 36.

statutes. Resistance was noted among the seeing world, for as yet they were not willing to accept the sightless as fully employable, productive members of their community. Like his industrial counterpart, the sightless man seeks to find in a job an opportunity for advancement and a place in the life chances of society. As for his access to scarce resources, his promotion to higher positions in both industrial and administrative areas is still infrequent and inadequate.

The blind as an exceptional child, whether of average or above average intellectual capacity, must have access to that type of education which will develop his potential. Those who were blinded in later life must have access to educational opportunities for re-training in old jobs or new training in different jobs for full rehabilitation into society. So the direction at this time is toward greater progress in vocational rehabilitation. The war-blind of World War I were pioneers as they sought out new and different avenues of employment than were traditionally claimed. The old traditional modes of employment for the sightless were gradually discarded to be given to those less efficient.

Though the process of industrialization negated many of the old job types, the specialization of new jobs and industrial labor created literally a host of new opportunities. Many of these were made accessible to the blind by the institutions of higher learning and through special educational program. "It is important to note that the retraining of the blind is not considered a superfluous luxury, but a social and economic necessity for the

community."²⁸ Of necessity, the productive effort must promote the integration of all those who are able and desirous of becoming part of the functional industrial effort. The means for such training is more available today than ever before. With the creation of a useful social product as its objective, the new techniques and technologies of both education and industry have drawn the handicapped into their system of growth and development.

During the last forty-five years, significant changes have been made in programs offering such services. These were predicated upon persistent and complete changes of ideas concerning those without sight. The misconception that the blind are with us always and will always be the same, is gone, as such fatalism is not part of progressive development. A new urgency has revived research into the causation of blindness with techniques, both social and physical, coming into play to eradicate both causes of and hindrances to the sightless. This is so aptly illustrated in the development of the field of ophthalmology.

As resourceful as many of our educators could be, they nevertheless designated the sightless as a separate segment of society. It was under this system of orientation that they patterned their services. We note the misconcept that the "blind child should play with the blind child, that the blind child should go to school with blind children, and that those who are sightless should work in sheltered workshops."²⁹

²⁸Ibid.

²⁹Eric T. Boulter, "World-wide Services to Blind People--the Changing Pattern," New Outlook for the Blind, LIX (January, 1965), 5-6.

This is not only a preposterous, but a self-defeating misconception. A philosophy that must underline all education today is that the sightless individual must develop to the fullest extent of his capacity, and that his potential be utilized in whatever mode possible as a contributing member to society. A new attitude is evolving that has its fulfillment not only in a person's full production as a part of industrial society, but in the development of the individual's satisfaction in living.

Two world wars, as well as Korea and Viet Nam, have brought home many handicapped persons. These men are an obvious part of society and have been made more evident to the social conscience through the mass media. Though the presence of the handicapped is noted everywhere, there is an uneasy, undefinable attitude that remains. A paraphrase from the Heidleburg philosopher, Windlband, aptly formulates this attitude:

The sum of the existence of the blind person divided by a reason never quite comes out without a reminder, rather in reality and above all, in his personal existence something impenetrable is left. That is the frontier at which critical comprehending reason must stop. When all is said and done the blind person remains a "stigmatized" individual.³⁰

Significance and Aim of Project

A society that is in balance will seek to establish and develop on-going methods and techniques to use each member's capacity to exchange his services for goods produced by the society. Assuming that the blind are members of its system, a society must find worthy ways

³⁰Schultz, op. cit., p. 38.

to make them more productive. Through the study of human rights, history has indicated that the blind have not just a right to live and to be protected, but the right to be developed as members contributing to the welfare of society and of their community. A study of the history of the blind in their relation to a seeing world shows that the blind person's usefulness to himself and to others rises in multiple proportion to the decreasing fears and superstitions on the part of the seeing. In turn, as the abilities and capacities of the sightless are known and considered acceptable for further development, basic institutions will then converge to further incorporate them.³¹

The family as a basic institution will protect its own and will seek to have society recognize the rights of the family members. Whether or not these members are handicapped, there is a personal relationship that is extended through the family to the larger community and society. The family seeks to enculturate and socialize the child into the world about him, but this is limited after a certain age because of modern society. Joseph Himes stresses the importance of culture in determining the reactions of sighted persons toward the blind, as well as the self-conceptions of the blind person. These cultural implications may vary in different time spans and different cultural groups.³²

³¹Richard Slayton French, From Homer to Helen Keller: A Social and Educational Study of the Blind (New York: American Foundation for the Blind, 1932).

³²Joseph S. Himes, Jr., "Some Concepts of Blindness in American Culture," Social Research Series Number 1 (New York: American Foundation for the Blind, 1951), pp. 10-22.

As the child grows, he develops relationships with his peer group and finds the pressures and force of the greater community a definite force with which he must contend.

Because of society's concern for the socialization of its members, it extends family functions into the institution of education. While the sightless are seeking to incorporate the traits, traditions, and cultural items of society, education seeks to help its students find their positions in society. America's educational system is predicated on the assumption that all individuals, no matter what race, creed, or handicap, must be developed to the fullest possible extent of their capacity. With this ideal in mind, education becomes more than a vehicle to communicate cultural items, it becomes a complex network in which research on new and diverse modes of human development is sought.

Interest groups in the form of volunteer organizations, both of and for the sightless, use their size and prestige to press for a fuller introduction and inclusion of the blind into society. At the present time there are nearly a thousand organizations dedicated to the service of the blind or partially sighted.³³ Their objectives are for the acquisition of knowledge, communication of this knowledge, rehabilitation, and the promulgation of the cause of blindness. While the academic community is interested in theoretical research as well as some of the practical aspects of its knowledge, the organizations

³³Joseph I. Pascal, "The Changing Attitude towards the Blind and the Partially Sighted," American Journal of Optometry and Archives of American Academy of Optometry, XXXI (June, 1954), 319-325.

seek to encourage and stimulate further research and development. Through both governmental and private funds, education is encouraged to more fully serve certain segments of society. Though limited to only some 500,000 in America, the blind have a level of interest and empathy that is quite extensive. Although the levels of efficient transmission of knowledge and incorporation of the blind into society vary, there are many state owned and operated institutes for their education because of this level of interest.

This project is concerned basically with the effect of knowledge acquisition on institutions and in particular upon teachers. Studies on the history of blindness indicate that knowledge furthers the incorporation of the sightless into the community as fully functioning members, by stimulating a change of attitudes which changes their relationship to the community.

A teacher who is responsible for the transmission of our cultural heritage to his pupils will have some knowledge which will affect his attitudes toward a certain segment of his pupil population. It is felt that were he to have sufficient knowledge concerning blindness and its effect on an individual's behavior, his own attitude affecting his behavior would be correlated with his knowledge. Knowledge and experiences about blindness becomes a major objective in the preparation of teachers who at one time or another might be associated with the blind. Organizations that work for the sightless will be seeking to replenish their staff and incorporate a higher level of educated and experienced personnel. They are constantly seeking through the position of members, as well as the funds endowed, to

encourage institutions to more fully prepare personnel to serve their specific interests. The institutions seeking to serve their community and society will then attempt to develop a more thorough curriculum to produce such personnel.

The basic aim of this project is to ascertain the effect that knowledge or cognition has on attitudinal formation or change. Not surprisingly, the beliefs held by the sighted concerning the blind are not subscribed to by the blind themselves. The socio-psychological base of these attitudes should be the subject of investigation as these irrational views would have been discarded long ago as a result of overwhelming contrary evidence.³⁴

This study has chosen among the educators a group of 453 students in special education. These students were chosen to illustrate the impact of prior life experiences as well as the knowledge accrued during their academic education. An assessment will be made of the amount and direction of change in attitudinal frames toward the sightless. As society becomes more aware of its attitudes toward the blind, the incorporation of the sightless into society will become an urgent objective. This type of research is important in order to fulfill positions of leadership which will seek to incorporate the handicapped, in this case the blind, as functioning members of the community.

³⁴Sydell Braverman, "The Psychological Roots of Attitudes toward the Blind," Social Research Series Number 1 (New York: American Foundation for the Blind, 1951), pp. 22-32.

CHAPTER II

A REVIEW OF THE LITERATURE

The Attitudes of the Sighted Toward the Visually Impaired

Introduction

Studies on attitudes concerning the blind are sparse in number and limited in scope. Research into the literature indicates that concerted study on attitudes and attitude formation toward the sightless has only been within the last twenty years. Unfortunately, the study of which attitudes exist has been the major area of interest rather than the study of which factors tend to stimulate or change attitudes.

The Assessment of Attitudes Toward the Blind

An attitudinal study by Cowen, et al., is noteworthy because of its attempt to amalgamate previously utilized scales purporting to measure some aspect of attitudes to blindness.¹ The instruments developed by Rusalem, Fitting, and Steingisser were modified to

¹Emory L. Cowen, Rita P. Underberg, and Ronald T. Verrillo, "The Development and Testing of an Attitude to Blindness Scale," The Journal of Social Psychology, XLVIII (1958), 297-304.

to incorporate blindness.² A series of items were given to a group of workers with the blind to be judged in terms of whether they reflected a positive or negative attitude towards this disability. Fifty-six items were found to have 100 percent judge agreement in these initial ratings. These items were given 101 subjects who responded to them on a four-point scale from strongly agree to strongly disagree. Item analysis yielded a final thirty-item scale with item-whole correlations ranging from +.44 to +.75, and a corrected split-half reliability of .91.

In order to test the hypotheses that the blind person is viewed in certain common ways with minority group members, and that negative attitudes to blindness will be found to occur together with pro-authoritarian attitudes, the California AM/AN, and F scales were given to the original subject sample. Significant correlations between negative attitudes to blindness, and anti-minority, anti-Negro, and pro-authoritarian attitudes were found. These findings were essentially a replica of the cross-validating sample, thus confirming the underlying hypotheses.

The study indicates that apparently the person who stereotypes the minority group member, and who places a high value on strength and authority, is also likely to have more negative attitudes toward

²H. Rusalem, "The Environmental Supports of Public Attitudes Toward the Blind," Outlook for the Blind, XLIV (1950), 277-288, E. A. Fitting, "Evaluation of Adjustment to Blindness," Research Series No. 2 (New York: American Foundation for the Blind, 1954); E. R. Steingisser, "The Influence of Set upon Attitudes Toward the Blind as Related to Self-concept" (unpublished M.A. thesis, University of New Hampshire, 1954).

the blind. This concept has been offered as a generalized formulation by Rusalem (see footnote 2), who advanced the hypothesis that the blind person has the status of any other minority group member and is subject to the same prejudices, fears, and negative attitudes on the part of the dominant majority group member.

It seems probable, however, that in terms of the modest magnitude of the present relationships, that Cowen, et al., may be dealing with only one factor in what may prove to be a complex network of determinants of attitudes toward the blind. Raskin, in a penetrating analysis of the attitude of sighted people toward blindness, has proposed that such attitudes are undoubtedly multiply caused, and has specifically suggested the probable operation of psychodynamic, situational, socio-cultural, and historical determinants.³ In short, this study proposes that there exists a common factor in attitudes toward all disability groups, which in turn has some common determinants together with attitudes to racial and religious minorities.

Differences in attitude by sex (females less negative) were observed on all four attitude scales utilized in the study. Although these were slight, the proportionately higher scores on the California scales by the male subjects does some discredit to the theoretical position of castration anxiety as an explanation for negative attitude towards blindness.

A survey by Whiteman and Lukoff among two different college

³N. J. Raskin, "The Attitudes of Sighted People Towards Blindness" (paper presented to National Psychological Research Council on Blindness, March, 1956).

groups further supports the view of the blind as a socially disadvantaged minority group.⁴ Involving sixty-five first-year students of the New York School of Social Work and fifty-eight Hunter College evening students enrolled in introductory courses in sociology, this study is particularly concerned with an analysis of the attitudinal differences and similarities between college groups presumed to vary in their general orientation toward, as well as their familiarity with, the overall problems of physical rehabilitation. In general, there was little difference between the Hunter and Social Work students with respect to the degree to which they emphasized the importance or the seriousness of blindness, either to the blind person or to the sighted respondent. Both groups disliked the idea of appraising a person mainly in terms of his blindness. On the other hand, however, it is significant to note that there is more readiness to perceive blind people as a separate group or as a special class in society.

Both of the college groups agreed with respect to readiness for personal interaction with blind persons; about 40 percent of both groups felt that spending time with a blind person would be inconvenient.

It is interesting that the main differences between the two groups is significant to the social isolation of the blind. There was a greater denial by the Social Work students of the unique qualities

⁴Irving F. Lukoff, and Martin Whiteman, "Attitudes Toward Blindness in Two College Groups," The Journal of Social Psychology, LXIII (1964), 179-191.

of blind people, but with greater attribution of unhappiness to the blind. Regarding the quality of interaction, the Social Work student group displayed a less protective orientation either at the interpersonal or at the public-policy level. A substantial minority, however, of the Social Work group stressed the significance of blindness as an all-pervasive attribute in self-or-other-evaluation.

Janicki obtained a ranking of twelve disabilities in the order they were perceived as most disturbing by fifty-four health professionals including physicians, psychologists, social workers, nurses, and members of other health-related professions.⁵ It was found that after blindness, the disabilities associated with impairments of motor ability were considered to be most disturbing.

The following is the order of disabilities perceived as most disturbing to least disturbing:

Blindness

Paraplegia

Amputated arm

Amputated leg

Arthritis

Asthma

Deafness

Facial disfigurement

High blood pressure

⁵Matthew P. Janicki, "Attitudes of Health Professional Toward Twelve Disabilities," Perceptual and Motor Skills, XXX, No. 1 (February, 1970), 77-78.

Chronic headaches

Diabetes

Stomach ulcers

In a study designed to compare physically handicapped and normal children at the elementary school level, sixty-four physically handicapped children were integrated with 361 normal children in fourteen elementary schools in Michigan providing special services for exceptional children in an effort to determine the effect of physical disability upon social position among peers.⁶ All of the physically handicapped children possessed normal intelligence. The sample included children from the first through the sixth grades.

The prediction of no significant differences between physically handicapped children and normal children in status scores as friends, playmates, and workmates was not confirmed by the data. In all but eight of forty-two comparisons on separate criteria the mean number of choices given physically handicapped children was below the mean number of choices for normal children in the same class. In fifteen instances the differences were significant at either the 5 percent or 1 percent levels of confidence. No age trend was apparent in friendship choices. The sixty-four handicapped subjects received significantly lower mean numbers of choices as friends, playmates, and workmates than the mean number of choices given normal children on these same criteria. The number of mutual choices on each criterion between

⁶Dewey G. Force, Jr., "Social Status of Physically Handicapped Children," Exceptional Children, XXIII (1957), 108-110, 134.

physically handicapped and normal children was much less than the proportionate number of mutual choices expected by chance; this could very well be a finding that indicates a general minority-majority subgroup identification based apparently on the label "handicapped," and that the normal children were also identified with a majority group based on physical normality.

In a less sophisticated survey utilizing the method of anecdotal records, the reactions of sighted children toward fifteen totally blind and six partially blind children in private nursery schools and public kindergartens were analyzed.⁷ Of the two hundred observations upon which this part of the study was based, acceptance of the blind and partially sighted child was the most frequently observed response. According to the report, the blind child appeared to be so well integrated in his social groups that the uniformed observer might not be aware of his handicap. Due to the subjective nature of this survey, the findings are probably less than reliable.

The most noteworthy study done in the field of attitudes toward blindness has been done by Lukoff and Whiteman. In one of their early reports, these men hypothesized that attitudes toward blindness are composed of several more or less independent dimensions; and that these dimensions are not necessarily determined by the same constellation of social and personal factors.⁸ After studying three

⁷Marianne J. Wolman, "Preschool and Kindergarten Child Attitudes Toward the Blind in an Integrated Program," New Outlook for the Blind, LII (1958), 128-133.

⁸I. F. Lukoff, and M. Whiteman, "Attitudes Toward Blindness: Some Preliminary Findings," New Outlook for the Blind, LV, No. 2 (1961), 39-44.

major groups (graduate social work students, undergraduate college students, and a more representative grouping from middle and low income housing developments) their findings suggest that attitudes toward blindness can be described in terms of four relatively independent dimensions:

1. The degree to which sighted persons perceive blindness as personally frustrating, impinging on their want satisfaction.
2. The conception of blindness as distinct from a differential readiness to attribute negative traits to blind people.
3. Readiness for interaction with blind people.
4. Differences among sighted individuals in the degree of pity, sympathy, or sensitivity they experience in thinking about or interacting with blind people, due to prior life experiences.

The first factor showed strongest correlations with the readiness to perceive blind people as unhappy and lacking in independence, but only weak relationship to readiness for interaction with blind people. In a field study of a sighted population in two housing projects, the correlation between a scale tapping the tendency to see blind people as emotionally upset and one measuring strength of pitying tendencies was only .19, attesting to a strong degree of independence between the two factors.

Several points about the conception of blindness dimensions can be made. This factor closely approximates what may be called a general factor insofar as it correlates most highly with the remaining components as well as with an attitudes-toward-blindness scale made up of items of widely diverse contents. Secondly, its relationship with

the sympathy-sensitivity dimensions is interesting. There is a group of sighted individuals who have unfavorable and distressing conceptions of blindness but who do not exhibit an unduly sympathetic attitude toward blind people.

There is a positive relationship between tendencies to feel pity for blind people on the one hand, and the tendency to espouse community "segregation" for the blind on the other.

In a study by Simmons there is definite, optimistic credit attributed to the general public's attitude toward blindness.⁹ The sighted public is found to be far from a unanimous body in its opinions about blindness and is better informed than had been generally estimated. Although the study does have some limitations (specifically, geographic and emographic), its findings point to noteworthy conclusions. After polling equal populations of college students and general adult residents in Florida, it appears that either age or educational level is an important factor in attitude formation, with the college population demonstrating better understanding and more positive attitudes than the older population polled. Studies to be cited later in this paper would lend support to the notion that educational levels and not age, influence attitudinal development.

The Relationship Between Information and Attitudes

The relationship between information about blindness and attitudes toward visual impairment is not easy to verify. Although

⁹Harry E. Simmons, "The Attitudes of the Sighted Toward the Blind," American Association of Workers for the Blind Proceedings, 1949.

research literature on knowledge and attitudes provides a spectrum of stances, social scientists agree that the connection between information input and attitudinal formation is not clear.

Lukoff and Whiteman indicate that the more informed the sighted individual is, the more prone he is to accept community integration of the visually impaired.¹⁰ Their study shows, however, that information is essentially unrelated to the emotional stereotype of the blind.

The above-mentioned survey shows that the relationship between information about blindness and the readiness for community integration does not necessarily imply that increased information produces a more receptive interactional orientation. Educational level, for example, correlates significantly both with the degree of information about blindness and with espousal of community integration. However, control on educational levels results in a non-significant association between information about blindness and interaction levels, indicating that the apparent causal efficacy of information in this case is spurious.

In an effort to test the literature on blindness which suggests that the more positive the information people possess about the blind the more they will perceive the blind as being less handicapped than those lacking such knowledge, Wyder and Wilson administered the Wright-Remmers Handicap Problems Inventory to sixty-four teachers

¹⁰I. F. Lukoff, and M. Whiteman, "Public Attitudes Toward Blindness," New Outlook for the Blind, LVI, No. 5 (1962), 153-158.

divided into four groups of sixteen each.¹¹ The HPI is a checklist of 280 items related to physical disability and according to its authors, is "an index of the verbalized impact of disability as it affects personal, family, social, and vocational adjustments."¹² Reliability estimates, using a Kuder-Richardson reliability coefficient, range from .91 to .95. The first group was supplied no information about blind persons, while the other three groups were given varying degrees of positive information.

An analysis of variance was computed for each part of the inventory; that is, for adjustments in the personal, family, social, and vocational areas of behavior. The results indicated that the hypotheses had to be rejected in all areas except the family area, for only in the matter of family adjustment did the positively informed group perceive the blind as significantly less handicapped than did the uninformed groups.

In the areas of personal, social, and vocational adjustment there were no significant differences in the perceptions of the groups. An important finding was that all four groups of normally sighted, non-disabled teachers perceived the blind significantly less positively than did the normative group for the HPI which was composed of one hundred disabled persons. This finding, therefore, strongly suggests that sighted persons, regardless of the information they possess about

¹¹Frank T. Wyder, and Milton E. Wilson, "Information as a Factor in Perception of the Blind by Teachers," Perceptual and Motor Skills, XXV (1967), 188.

¹²Ibid.

blindness, view the blind as considerably more handicapped than handicapped people themselves view blindness. This notion is supported by a statistical study of an attitudinal differences comparison by Lukoff and Whiteman (see footnote 4, p. 4).

In a study by Murphy designed to measure by a rating scale the attitudes of several groups of educators toward exceptional children, it was shown that there is at least a positive trend-correlation between how much a person thinks he knows about a specific area of exceptionality and his attitude of acceptance or preference concerning it.¹³ The vast majority of the subjects participating in this study not only placed the visually handicapped child on the rejection end of the attitudinal continuum but also indicated that they knew very little about these children in comparison to those having other types of disability.

In relation to the category "least prefer to teach," the classroom teachers named first the delinquent and next the visually handicapped. Principals designated pupils with visual impairments as the group they would least prefer to teach, as did freshmen teachers-to-be. Speech clinicians indicated that the visually handicapped were next to the least preferred by the respondents as a group when compared to all other categories of exceptionality except for the delinquent.

All of the responding groups except the specialists felt that

¹³A. T. Murphy, "Attitudes of Educators Toward the Visually Handicapped," Sight Saving Review (Fall, 1960), 157-161.

they knew less about the visually handicapped group than about any other considered. A definite, moderate trend was found indicating that the more a person feels he knows about a handicapping condition the more inclined he is to want to work with children who have it. This rejection of the visually impaired is poignantly confirmed in a survey by Kvaraceus¹⁴ in which he measured the degree of acceptability of deviate children among eighty-four graduate students enrolled in a course on "The Education of the Exceptional Child." The categories included (1) superior and gifted, (2) mentally retarded and defective, (3) emotionally disturbed, (4) delinquent, (5) blind and partially seeing, (6) speech defective, (7) crippled and physically handicapped, and (8) the deaf and hard of hearing. The study revealed that the visually impaired were the group of children about which the graduate students were the least well-informed, ranking only behind the delinquent and the mentally retarded in the "least prefer to teach" category. Kvaraceus emphasizes the fact that attitudes in the community and among professional workers, if negative and rejecting, may be more detrimental than the handicap itself.

The Relationship between Prior Interaction and Attitudes

Are attitudes of sighted children toward blindness related to contact with visually handicapped children in school settings? This was the main problem explored in a study by Steinzor¹⁵ on school peers

¹⁴W. C. Kvaraceus, "Acceptance-rejection and Exceptionality," Exceptional Children 22 (1956), 328-331.

¹⁵Luciana Visentini Steinzor, "School Peers of Visually Handicapped Children," New Outlook for the Blind 12 (1966) 312-314.

of visually handicapped children. The study was conducted during the year 1963-64 in three elementary and two junior high schools in New York City. A total of 108 boys and girls were interviewed. The sample was random, stratified by age and sex.

In this study the lowest attitudes of cooperation and highest attitudes of rejection toward blind children were found among their present classmates, especially among those who were in classes with blind children for the first time. The children who had been in classes with blind children during previous years extended these negative attitudes. At the same time they had a higher attitude of independence from sighted and visually impaired children, an attitude which, in the definition used in this research, implied respect for another person's needs without entering into cooperative activities. The least negative and most positive attitudes (highest cooperation and lowest rejection indices) were found among schoolmates who had been in classes with blind children during one or more previous years and who were presently in other classes.

The implications of these findings are that sighted children undergo a shock-at-first encounter during the first year of close classroom contact with handicapped students. Favorable attitudes seemed to be post-factum, when contact was over.

A second part of the research showed that separate, exclusive classes for handicapped pupils did not influence sighted children's cooperative attitudes. School contact in this setting appeared to foster an attitude of independence from the blind children.

A third facet of this survey studied the effect of blind students attending classes for the sighted on the junior high school level. Interviews from this group revealed that attitudes of cooperation toward blind students were higher in proportion to the immediacy of contact; highest for students in the same classes attended by the blind, lowest in the group without contact. Attitudes of independence were lower in proportion to the immediacy of contact; lowest among classmates of the blind, highest in the group without contact.

At the junior high school level, in a setting where the participation of visually handicapped students in classes for the sighted was almost complete, positive effects of class and school contact were evident and no negative influence could be detected. The finding that attitudes of independence diminished under influence of contact could be considered positive, since they were displaced by attitudes of cooperation.

It would not be fair to say that the implications of such a study confirm the success of all integrated programs. Group ratio is definitely a factor to be further studied as is the significance of the influence of age and maturation.

In a study involving 232 sighted children in grades three through eight, Bateman found that normal children not only are more positive if they have known blind children, but that they become still more positive as the number of blind children known increases.¹⁶ It

¹⁶Barbara Bateman, "Sighted Children's Perceptions of Blind Children's Abilities," Exceptional Children 27 (1962), 42-46.

becomes evident from this particular survey that those children who had known blind children perceived them as being somewhat more capable than did those subjects who had not known blind children. The tendency toward increased positiveness of appraisal of blind children's abilities, however, appears to level off at the upper grade levels.

The findings of Rusalem (see p. 22) and Cowen, et al. (see p. 21) contradict superficially the thesis that advocates contact with blind individuals to bear a direct, positive relationship to attitudes toward visual impairment. In spite of these men's conclusions, there seems to be a convincing degree of literature to support a stand to the contrary.

Frances,¹⁷ in an exploratory study of the effect of physical social contact between blind and sighted persons on the attitudes of the sighted toward the blind, found that initial contact was important. The contact variable was manipulated by exposing six groups of three male and three female college students to one of the three blind male accomplices during six weekly fifty-minute discussion groups on child psychology. Sighted subjects' attitudes were assessed before and after the experimentally programmed sessions. A behavioral check was kept on changes in verbally expressed attitudes by the use of Bales' Interaction Process Analysis. In addition, the California Personality Inventory was given before and after the experimental contact and the scale scores were correlated with the attitude scale scores of those

¹⁷Conrad Cole Frances, "Contact as a Determinant of Sighted Person's Attitudes Toward the Blind," Dissertation Abstracts International 31 (11-B) (May, 1971), 6892-6893.

subjects who showed the most radical positive and negative shifts in attitudes following the experiment. All subjects also reported by questionnaire the degree and nature of their past contacts with blind persons.

Initial comparison of experimental contact groups and control no-contact groups revealed few significant results. However, when the subjects were rearranged according to whether or not they reported having had prior contact with blind persons, it became apparent that naive subjects who reported no prior contact tended to hold stereotypically strong positive or negative attitudes toward the blind. These subjects also tended to change their attitudes significantly in a positive direction, apparently as a function of the programmed contact. The behaviorally measured interaction data supported this theory, but no meaningful CPI correlations came to light.

It appears that initial contact is crucial to attitude formation and alteration, and that it generally produces greater communication and positive attitude alteration in naive subjects. Persons who have contacted blind persons before tend not to display any great shifts in their attitudes as a function of contact unless the contact is in some way unusual or fits into existing attitudinal patterns.

It was discovered during research of the literature that studies on blindness were in many aspects contradictory and biased. Their focus was primarily exploratory, with many areas left unexamined. Like much research, problems engendered have been undoubtedly multiplied and amplified by diverse instrumentation, as well as varied techniques, and in many cases by less than comprehensive study design.

The direction and quantity of change engendered by knowledge impact has not been a major objective. A number of studies are concerned with basic information about blindness and how it affects the attitudes, but their number is severely limited.

Inasmuch as many of the studies concerning the blind have been unidimensional, their authors have suggested a more multidimensional approach in further research. Of various studies in this field one seemed most applicable to the problem. Begab¹⁸ studied the unique combination of prior life experiences and education and the impact on the nature of attitude formation. Utilizing a sample of social work students from seven universities, he sought to evaluate the effect of antecedent life experiences and their impact on the social worker's cognition, beliefs and attitude tendencies toward mental retardation. The present study is patterned after this research project.

The reason for this project is predicated upon the following points: Knowledge in relationship to attitude is not obvious. The idea remains that it is not the amount of facts one possesses concerning an issue, but rather, its origin, either in time or in relationship to some significant variable, which influences attitudes.

¹⁸M. J. Begab, The Effect of Differences in Curricula and Experiences on Social Work Student Attitudes and Knowledge about Mental Retardation (U. S. Dept. of Health, Education, and Welfare, Public Health Service, Institute of Child Health and Human Development, 1968).

CHAPTER III

THEORETICAL CONSIDERATIONS AND ASSUMPTIONS

This study is concerned with attitudes and how they are changed. However, these changes cannot be understood without an examination into the nature of attitudes and the processes and factors by which they are formed. The focus here is on development, and the concept of socialization is important to the development of attitudes. In a broad sense, socialization refers to the process by which the human organism acquires a characteristic way of behaving, and it is the values, norms, and attitudes of the social units of which he is a part. As a man develops and grows, the attitudes that are related to his particular environment and associations grow and develop. Charles Horton Cooley, as early as 1909, recognized that the individual and society, both consisting of personal ideas, are two sides of the same coin. Both society as a whole and separate individuals exist in a state of interdependence. Cooley noted that no society exists independent of individuals, and no individual has existence apart from society, as the two are but collective and distributive aspects of the same thing, which is "Human Life."¹ The self, then, is defined and developed in social interaction, and as a result, it is a social product.

¹Charles Horton Cooley, Human Nature and the Social Order (New York: Scribner, 1902), p. 1.

The individual's family is instrumental in initiating his integration into society. As he progresses, he enlarges his circle of significant others, and is further socialized to share a particular set of attitudes. The concept of significant others represents the recognition that, in a fragmented and differentiated world, not all persons with whom one interacts have identical or even compatible perspectives. Consequently, the individual must give greater priority to the perspectives of certain others in order for his socialization to proceed.

The social self develops in primary groups, which are the birthplace of civilization for both the individual and the larger units of social organization. These groups are primary because they form the basis of the nature and ideals of the individual in that they provide the individual with his earliest experience of social unity and are the source of more extensive relationships.² They are characterized by intimacy, face-to-face association, and cooperation. Since they occupy the childhood years of development, the family, the play group, and the neighborhood group are the most important primary groups. Thus, a significant segment of one's personality is seen as being rooted in his interaction with others, that is, in his social relationships.

Man is distinguished by knowledge of both his physical and social worlds. However, the attitudes he has depend strongly on his social-psychological world. His particular set of attitudes will be determined to an extent by his unique set of life experiences set in the social context of his personal relationships with significant others and his general environment.

²Charles Horton Cooley, Social Organization (New York: Scribner, 1909), p. 349.

As the individual acquires more and more attitudes--as he "assimilates" more and more objects in his world--his improvisations toward these objects and his fresh examinations and interpretations of them decrease. His actions become stereotyped, predictable, and consistent--and social life becomes possible. For where there are no enduring beliefs, evaluations, and action tendencies which can be shared by a company of men, social life as we know it would be impossible.³

Thus it may be seen that man's attitudes develop as a result of his social interactions. His attitudes also undergo changes in the course of his lifetime, and this study is concerned with these changes. In order to understand the nature of the attitudes and processes by which they undergo change, it is essential that an examination be made into the components of basic attitude structure.

There are two essential components of the concepts of attitudes:

- (1) The concept of attitudes provides science with a link between the psychological states of the individual and the physical objects or environment of the individual's world. Thus, being able to understand the conditions under which attitudes are created, persist, and change is similar to being aware of the conditions of social interaction.
- (2) Since concepts are understood best when the conditions under which they do and do not change are understood, another essential component of the change, and that it must also permit the factual undertaking of observed behavior, including speech, from which attitudes are inferred. Behavior is thus the ultimate judge of an individual's attitude structure.⁴

³David Krech, Richard S. Crutchfield, and Egerton L. Ballachey, Individual in Society (New York: McGraw-Hill Book Co., 1962), p. 137.

⁴Theodore M. Newcomb, "Attitude," in A Dictionary of the Social Sciences, eds.: Julius Gould and William L. Kolb (New York: The Free Press, 1964), p. 40.

Many definitions stem from these two basic components of attitude and have been developed to define an attitude structure in precise terms. Basically attitudes are regarded by behavioral scientists as tendencies to act with regard to some specificable entity. Thomas and Znaniecki have viewed attitudes primarily in the context of social value, which they define as "any datum having an empirical content accessible to the members of some social group and a meaning with regard to which it is or may be an object of activity."⁵ Allport advanced the idea that an attitude is organized through social experience and stressed the strong influence an attitude exerts upon the individual's response to related situations.⁶ From definitions such as these, a cumulative definition of an attitude may be given as "the individual's organization of psychological processes, as inferred from his behaviour, with respect to some aspect of the world which he distinguishes from other aspects."⁷ The attitude represents both past experiences and contemporary influences acting on such a situation and determining the individual's response tendency. Attitudes are enduring in the sense that certain parts of attitudes are transferred to new situations, but they change insofar as new attitude components are incorporated through experience in new situations.

⁵W. I. Thomas and F. Znaniecki, The Polish Peasant in Europe and America, Vol. I (New York: Alfred A. Knopf, 1927), p. 21.

⁶G. W. Allport, "Attitudes," in Handbook of Social Psychology, ed.: C. Murchison (Worcester, Mass.: Clark University Press, 1935), p. 810.

⁷Newcomb, op. cit., p. 40.

An attitude, then, may be capsulized as "an enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world"⁸ that are inferred from a particular behavior. Kretch, Crutchfield, and Ballachey refer to the "'package' of particular beliefs, feelings, and response tendencies" as the attitude components,⁹ and at this point it is important to note the interrelationships between them.

Cognition is used by various social scientists to indicate all the various aspects of knowing. These aspects include perception, judgment, reasoning, remembering, thinking, and imagining, and combine to form the desire part of an attitude. The term cognition has come down to us from the writings of Plato and Aristotle. Plato distinguished between three aspects of the soul: the intellectual, the emotional, and the moral, or, to put it in more contemporary language, the cognitive, the affective, and the conative. These three aspects are similar to the present description of the components of an attitude. Aristotle modified this, combining the emotional and moral under one aspect. The triad, cognition, feeling or affect, and conation, was revived in the late eighteenth century by Tetens and Kant in an attempt at classification of mental processes.¹⁰ Basically, then, cognition

⁸David Kretch and Richard S. Crutchfield, Theory and Problems of Social Psychology (New York: McGraw-Hill Book Co., 1948), p. 152.

⁹Krech, Crutchfield, and Ballachey, op. cit., p. 137.

¹⁰D. R. Price-Williams, "Cognition," in A Dictionary of the Social Sciences, eds.: Julius Gould and William L. Kolb (New York: The Free Press, 1964), p. 99.

consists of the knowledge the individual has about the object. The feelings that an individual has concerning an object in a particular situation are associated with the emotions that he feels about the object. Feelings give the attitude its motivational character and in this sense are similar to the traditional definition of conation as the striving aspect of experience that accompanies a desire to act.

The response tendencies of an attitude are exhibited through the behavior of the individual. The relation of behavior or action to the other components of an attitude is further elucidated by Parsons and Shils when they discuss the terms under which behavior may be called action. Basically, behavior must be analyzed in terms of the anticipated reaction of the individual toward which it is directed, the physical situation in which it takes place, the relative intelligence of the behavior, and finally the original motivation involved in precipitating the behavioral response.¹¹

The sociological concept of system of orientation is useful at this point in discussing the gestalt of attitude structure. A system of orientation may be defined as a complex network of items of knowledge (cognition), values (feelings), and societal norms (influence response), which form the basis by which a group or an individual comprehends a particular situation and after consideration of various approaches, finally chooses what appears to be the most appropriate behavioral response. American sociologists conventionally have spoken of a

¹¹T. Parsons, and E. A. Shils, "Values, Motives and Systems of Action," in Toward a General Theory of Action, eds.: T. Parsons and E. A. Shils (New York: Harper & Row, 1965), p. 53.

person's or group's definition of the situation as containing socio-cultural norms, which in turn are interspersed with personal attitudes. Thus, again, is seen the influence of the significant others in the development and maintenance of an attitude system. To reiterate, action assumes that certain classes of objects attract or repel. Different reactions are the result of the individual embodying different ideas based on varying socio-psychological experiences regarding the object, and on the individual's personal attitudes toward the object.

At least one investigator assumed the characteristics of an attitude system to be intercorrelated and consistent.¹² However, to a large degree, studies on blindness cannot be said to exhibit this internally consistent pattern. Logically, as well as practically speaking, the valence and complexity of an individual's cognitions may differ in intensity and scope from his feelings and actions, and vice versa. Often, emotion takes precedence over intellectual cognitions and results in response tendencies radically different than would be expected if logic had overwhelmed emotions. One compromise concerning the assumption of consistency may be found in Bettelheim and Janowitz's study of prejudice where it was noted that greater consistency among attitude components exists at the extremes of the valence continuum.¹³

One essential aspect of attitude theory is that attitudes are

¹²D. T. Campbell, "The Generality of a Social Attitude" (Ph.D. dissertation, University of California, Berkeley, 1947).

¹³B. Bettelheim, and M. Janowitz, Dynamics of Prejudice: A Psychological and Sociological Study of Veterans (New York: Harper & Row, Pub., 1950), p. 30.

formed in the process of want satisfaction. Those objects which somehow help the individual to attain his goals and satisfy his wants will be looked upon favorably. On the other hand, those that inhibit want satisfaction and goal attainment will stimulate a negative response. One aspect of want satisfaction is found in the self-conception theory. Kuhn has found that basically an individual's self-conception is his view of himself derived from his perception of his identity. This perception is based on an understanding of positive and negative interests and on his attitudes toward certain things, both on cognitive and affective levels. It is the overall picture of one's goals and the possibility of achieving them successfully. This perception, though often vague, of the ideological (world view) frame of reference, serves as a basis for consideration and evaluation of both the individual's self-concept and his view of others.¹⁴

While the above defines the components of an individual's self-conception, the development of the self-conception is delineated, again, from social interaction. Significant others categorize the individual in particular ways and come to expect a set of behavior from the individual. On the basis of these expectations, they then act with reference to the individual. The individual comes to define himself in terms of how others see him, and comes to act in ways appropriate to others' expectations.

In the case of parents of a blind child, want satisfaction,

¹⁴Manford H. Kuhn, "Self-Attitudes by Age, Sex, and Professional Training," The Sociological Quarterly 1 (1960), pp. 39-55.

discussed previously as the desire to see the child accept social responsibility and achieve independence as a minimum, is overtly denied at first. The child is not seen by the parents as capable of satisfying their projections or of fulfilling their present expectations. The parents, whose self-conceptions revolve around symbolic goal achievement, see the child as a failure on their part, and fear that their hopes of vicarious achievement through the child's performance (successful) of diverse activities will not be realized. This in turn, lowers their own self-conceptions, and traditionally has resulted in marked rejection of the child because it is seen as a barrier to want satisfaction. It is important to note, however, that in some cases the negative attitudes are modified into more positive ones, as has been noted in cases where the blind child's success has been greater than had been anticipated.

In the teaching profession, particularly in the field of special education, personal satisfaction is derived from the process of helping pupils achieve within a variety of situations. Special education students, in line with self-conception theory, also define their social self in terms of the success of their students in living up to the expectations the special education teachers have for them. Failure to live up to the expectation lowers the self-conception of the teacher because his want satisfaction has been blocked and his image of himself as a successful instructor is lowered. Research supports the contention that working with the blind is, except for the juvenile delinquent, the least desirable of special education categories.¹⁵ It would appear

¹⁵A. T. Murphy, "Attitudes of Educators Toward the Visually

that this reluctance to work with the blind, in terms of want satisfaction, is predicated on the fear that the blind child might not succeed and consequently the self-conception of the special education teacher will depreciate. The circle of want satisfaction denial and consequent rejection of the blind as a desirable category to work with may be perpetuated by lack of knowledge about and experience with the blind.

In general, then, the social act of choosing a client group to work with, denotes a socially influenced activity that is goal-directed, and consists of three parts: (1) choosing activity according to social prescriptions and influences by expectations of significant others, (2) plans of action based on prior attitudes, and (3) anticipated goal achievement for satisfaction of personal needs.¹⁶ In choosing a client group with which to work, the blind appear to arouse negative feelings in some special education student teachers. These feelings may be based on the fear that the blind will fail to validate the anticipations of goal success of the student teacher, causing, in turn, lowered self-concept.

In line with this discussion, it is deemed important to note that Faris revised G. H. Mead's original notions of the relation of time to human behavior and wrote that most human acts extend considerably through time; further, they involve in their covert aspects, attitudes, and expectations that may extend quite far forwards and

Handicapped," Sight Saving Review (Fall, 1960), pp. 157-161.

¹⁶Manford H. Kuhn, "Social Act," in A Dictionary of the Social Sciences, eds: Julius Gould and William L. Kolb (New York: The Free Press, 1964), p. 643.

and backwards in time.¹⁷ Thus it is seen that prior life experiences and knowledge or lack of knowledge concerning the blind may be part of the attitudinal system that influences the social act of choosing or rejecting the blind as a client group.

Attitudes, however, are not only developed in response to want satisfaction; they also are a product of the information to which the individual is exposed in his social interactions within his particular environment. In discussing attitude changes, it should be noted that quantity and direction of attitudinal change may be connected to previous related attitudes and earlier knowledge levels. Thus the individual who has no preconceived ideas concerning blindness, due to the fact that he was exposed to little, if any, information about blindness, may be more openminded about positive information disseminated through public education efforts, or, in this case, in the special education classroom or practicum location. The possibility has been raised that if one perceives himself as well informed about the subject of blindness, regardless of whether his facts are accurate or not, he may reject new more positive views on blindness via special education information efforts, a situation, which, in this case, may lead to the rejection of the blind as a special education client group.

Several factors influence whether the new information will change attitudes or strengthen them. Change appears to depend upon the particular communication situation, the personal characteristics

¹⁷ Ibid.

of the communicator, the type of communication process and the inherent content of the message itself.

The cognitive-affective process of discriminating between facts and beliefs is highly influenced by the type of information and, even more importantly, by the amount of respect and authority given the source of the information by the individual. This concept regarding the importance of the source of information shares common ground with reference group theory. Reference groups are said to play a significant part in the establishment of the individual's frame of reference which affects his experiences, perceptions, and self-concept. M. Sherif relates attitudes and reference group theory in a succinct way. He notes that the individual's attitudes which define and regulate his behavior to other persons, other groups, and even to himself, are formed in relation to the values and norms of his reference groups. He gives reference groups the important position of being the basis of the self-concept, giving a sense of belongingness, and at the very base of the individual's social life.¹⁸

Bringing the concept in line with special education and blindness, it is noted that within the educational milieu of the graduate school, the faculty member is regarded as one of the prime sources of information dissemination. It is important to note the degree of perceived authority invested in the faculty who provides information which might possibly modify the student's attitude system toward blindness, in particular. It may be that students regard faculty members as

¹⁸M. Sherif, Group Relations at the Crossroads (New York: Harper & Row, Pub., 1953), p.

persons with whom they wish to identify, as role models whose verbal communications are considered to be of value. Merton and Kitt provide a case in point concerning the importance of reference groups as influencing agents, particularly if they are considered to be more experienced.¹⁹ They found that inexperienced combat troops are influenced by association with soldiers who have had combat experience. Inexperienced troops, desiring to affiliate themselves with those who have had experience in battle, tend to take over the latter's norms and values and to evaluate themselves by reference to them.

The importance of the section on reference groups and reliable sources of information as influencing agents regarding blindness, is delineated well by Shibutani. He feels that much of the interest in reference groups arises out of concern with situations in which a person is actively confronted with the necessity of acting on the basis of a choice made between alternatives.²⁰ A peculiar problem of reference groups pertains to determining whose acceptance of responses are needed in order to perpetuate a stated viewpoint. This leads to a consideration of which reference group becomes the major influences in sustaining a cognitive-affective reaction. In the case of special education students, this serves to stress the decision that is made with regards to choosing the blind as a client group, and how this decision is influenced.

¹⁹R. K. Merton, and A. S. Kitt, "Contributions to the Theory of Reference Group Behavior," in Studies in the Scope and Method of "The American Solder," eds.: R. K. Merton and P. F. Lazarsfeld (New York: The Free Press, 1950), pp. 70-105.

²⁰T. Shibutani, "Reference Groups as Delimited Perspectives," American Journal of Sociology 60 (1955), 562-569.

An important theoretical construct in this study involved the idea of balance theory. "Balance theory defines a state of balance as existing in a cognitive system when the elements of the system form units which have noncontradictory relationships."²¹ However, a belief structure may or may not contain certain inconsistencies. Abelson notes that by inconsistency is meant not inconsistency in a logical frame, but psychological inconsistency, or as it has been variously referred to, imbalance, incongruity, or dissonance.²²

The concepts of consistency and inconsistency are neither novel nor unique to psychology. As Zajonc has indicated, the concepts have appeared in almost all sciences at one time or another.²³ The sociologist, Sumner, for example, spoke of "a strain toward consistency"²⁴ among the cultural folkways, and Cannon, a biologist, was the first to apply the concept of homeostasis to internal physiological activities.²⁵ Glass gives the real contribution of the contemporary balance theory, or theories, as lying in their ability to specify the kinds of

²¹Michael J. Begab, The Effect of Differences in Curricula and Experiences on Social Work Student Attitudes and Knowledge about Mental Retardation (Washington, D.C.: U. S. Department of Health, Education, and Welfare, 1968), p. 28.

²²R. P. Abelson, "Modes of Resolution of Belief Dilemmas," Journal of Conflict Resolution 3 (1959), 343-353.

²³R. B. Zajonc, "Balance, Congruity, and Dissonance," Public Opinion Quarterly 24 (1960), 280-296.

²⁴W. G. Sumner, Folkways (New York, Ginn & Co., 1906), p. 5.

²⁵W. B. Cannon, The Wisdom of the Body (New York: Wm. Norton & Co., 1939), p. 15.

behavior, to which inconsistency leads.²⁶ For example, will inconsistency between an attitude (blindness is incapacitating), and a contrary communication (blind people can and do lead productive lives), lead to attitude change or to some other behavior?

Despite the part that inconsistency has played in order schools of social psychology, knowledge about the implications of inconsistency for psychological functioning is relatively limited. McGuire has found that only within the past twenty years have social psychologists really begun to concern themselves with the issue of inconsistency--what it is and how people react to it.²⁷

One of the important points to be noted is that the force for consistency may be the result of personal motivational dynamic aspects. Current formulations about consistency can be traced in part to the motivational analysis of psychological conflict developed by Kurt Lewin.²⁸ Brehm and Cohen also involve motivational dynamics in their theory of balance, saying that dissonance is due to the incompatibility introduced when the individual's commitment to behave in a certain way frustrates another strong motive.²⁹ Bringing the theory into more

²⁶David C. Glass, "Theories of Consistency and the Study of Personality," in Handbook of Personality Theory and Research, eds.: Edgar F. Borgatta and William W. Lambert (Chicago: Rand McNally & Co., 1968), p. 790.

²⁷W. J. McGuire, "The Current Status of Cognitive Consistency Theories," in Cognitive Consistency, ed.: S. Feldman (New York: Academic Press, 1966), pp. 2-46.

²⁸Kurt Lewin, A Dynamic Theory of Personality (New York: McGraw-Hill Book Co., 1935), pp. 25-33.

²⁹J. W. Brehm, and A. R. Cohen, "Choice and Chance Relative

general terms, Krech and Crutchfield maintain that imbalance in the psychological field produces tension which motivates the individual to restore consistency or equilibrium.³⁰

Festinger has made an attempt to state a more general theory of inconsistency in his theory of cognitive dissonance. This formulation, because of its generality has the advantage of being able to deal with a wide variety of social-psychological phenomena involving inconsistency. Thus the theory of cognitive dissonance has been useful in analyzing the social influence process, consequences of decisions, ego-defensive process, and others. Basically, then, Festinger's theory may be stated as follows: ". . . two cognitive elements are in dissonant relation, if, considering these two alone, the obverse of one element would follow from the other."³¹ In accordance with this theory, it is assumed that when the individual enters a state of dissonance, he will experience psychological discomfort which will motivate the person to try to reduce the dissonance and attempt to achieve consonance, and in addition to trying to reduce it, the person will actively avoid situations which would likely increase the dissonance. The presence of dissonance, in other words, provides a source of motivation much the same way as do other needs like hunger and thirst.

The primary units of dissonance theory are cognitions and the

Deprivation as Determinants of Cognitive Dissonance," Journal of Abnormal Social Psychology 38 (1959), 383-387.

³⁰Krech and Crutchfield, op. cit., p. 143.

³¹L. Festinger, and J. M. Carlsmith, "Cognitive Consequences of Forced Compliance," Journal of Abnormal Social Psychology 58 (1959), 203-210.

relations between them. Festinger defines a cognitive element or cognition as any degree of knowledge regarding physical or social-psychological thoughts and action tendencies in the individual.³² In an example of the theory of cognitive dissonance, it may be observed that the knowledge of smoking increases the probability of contracting lung cancer (an end to be avoided), thus this is a dissonant with the knowledge that one smokes two packs of cigarettes daily.³³

Dissonance gives rise to pressures to change social-psychological elements so as to reduce the amount of dissonance. However, this process is a complex one and is often not achieved. Especially is this true when balance is possible only through retaining unpleasant thought or belief systems.

Prior to discussing attitude change, it may be well to note that a number of studies have demonstrated a direct relationship between affective and cognitive dispositions toward an attitude object.³⁴ In attitude research the affective component refers to feelings; from positive to negative on a continuum. The cognitive component consists of the individual's ideas about the attitude object.

Backman and Secord discuss attitude changes as follows:³⁵ Early

³²L. Festinger, A Theory of Cognitive Dissonance (Evanston, Ill.: Row, Peterson & Co, 1957), pp. 51-53.

³³Carl W. Backman, and Paul F. Secord, eds., Problems in Social Psychology: Selected Readings (New York: McGraw-Hill Book Co., 1966). p. 112.

³⁴A. D. Woodruff, and F. J. DiVesta, "The Relationship between Values, Concepts, and Attitudes," Educational Psychological Measurement 8 (1948), 645-660.

³⁵Backman and Secord, op. cit., p. 116.

attempts to change attitudes usually resulted in actual changes in the cognitive component, followed by predicted changes in the direction of positive affect on attitude items. For example, attempts to reduce prejudice toward a minority group through education presented the target individuals with factual information about the minority group persons that contradicted some of the prejudiced beliefs about them. Although such studies did not specifically isolate cognitive and affective components, they tacitly assumed consistency between these constituents of an attitude. Attitudes were assessed before and after the delivery of information and were expected to become more favorable. However, the reverse is also possible: namely, that if a change in the affective component is induced, corresponding changes in the cognitive components would be expected to follow.

After assuming that cognitive and affective components of attitudes are congruent with each other, it follows that their interrelationships will affect attitude change. There is the possibility that the reason why cognitive components of attitudes, sometimes contrary to objective evidence, are resistant to change is that they are often anchored in the concomitant value that is ascribed to them.

Rosenberg states the matter succinctly when he postulates that dissonance between affective and cognitive components of an attitude produces a desire to restore consistency. Restoration may again take a number of forms but change in beliefs or affect is a primary concern. His prediction states that if a person undergoes a change in his beliefs regarding an object, his behavior toward that object will show corresponding change. If there is a change in the person's behavior

toward the object, his attitudes regarding the object will show corresponding change.³⁶ Carlson has submitted research supporting the prediction of affective change as the result of corresponding cognitive change,³⁷ while Rosenberg has supported through research the concept of cognitive change as a result of a change in the affective component.³⁸

In summary on attitude change and dynamics, the following general propositions may be made:

When the affective and cognitive components are mutually consistent, that attitude is in a stable state; when the affective and cognitive components are mutually inconsistent, the attitude is in an unstable state and will undergo reorganizing activity until such reorganization eventuates in the attainment of affective cognitive consistency.³⁹

However, it may be that "special features of the competing components make the reestablishment of consistency either impossible or too costly," in which case "activity will continue until the person manages to put the irreconcilable inconsistency more or less permanently beyond the range of active awareness."⁴⁰

The concepts of balance, consistency and dissonance may be used not only to explain attitude change, but they can also be applied to explain various degrees of resistance to change. The cognitive, affective, and behavioral elements may also exhibit a state of consistency,

³⁶Milton J. Rosenberg, "Cognitive Reorganization in Response to the Hypnotic Reversal of Attitudinal Affect," in Problems in Social Psychology, eds.: Carl W. Backman and Paul F. Secord (New York: McGraw-Hill Book Co., 1966), p. 118.

³⁷E. R. Carlson, "Attitude Change Attitude Structure," Journal of Abnormal Social Psychology 52 (1956), 256-261.

³⁸Rosenberg, op. cit., p. 117.

³⁹Ibid.

⁴⁰Ibid.

and in general, the greater the consistency among such elements, the greater the resistance to change.⁴¹

In relating the above information to the present study, it may be seen that the attitudes of special education students toward the blind at the beginning of their graduate education may be the result of strongly held cognitive beliefs, or affective feelings. During the course of their study the learning experience may involve intellectual, academic information about the blind, through lectures, books, films, and research; and emotional experiences, influencing the affective components of the attitude, such as they would encounter in dealing with the blind in a practice teaching setting. If an individual, upon entering graduate school, has positive attitudes toward the blind and encounters positive information in this academic and practicum experiences, he will experience consistency between the attitude components and no dissonance will exist. On the other hand, if the beginning special education student has not been exposed to information concerning the blind that stresses their capabilities, and is in his academic and practicum experience exposed to a group of blind persons capable of productive, independent behavior, he will experience dissonance between his cognitive and affective components of his attitude structure and a state of inconsistency will prevail.

Basically, then, the individual shifts his inner attitude to correspond more closely with outward expression. Attitude changes, toward the positive end of the continuum, may be postulated then, when

⁴¹Backman and Secord, op. cit., p. 115.

the student is forced into intimate contact with the blind by life circumstances, agency requirements, or student teaching in a setting that is frequently contrary to the student's preferred choice. Studies on prejudice toward minority groups support this general prediction.

Summary of Principles and Assumptions

In summary, the guiding principles, assumptions and theoretical framework for this study may be outlined as follows:

1. Attitudes develop and change in the process of want satisfaction.

The general public looks upon the blind as possessing personal qualities and limitations incompatible with want satisfaction. Those who have had intimate contact with the blind through life experience will be either more frustrated in their wants or will have learned through experience to cope with frustrations or find substitute satisfactions. Attitudinal intensity constitutes a barrier to change.

Attitudes of students with no previous exposure to the problem will depend upon their view of the professional satisfaction to be derived from work with the blind as a student group. The nature of their educational experience will bear upon this perspective.

2. Attitude change is brought about through additional information, the influence of reference groups and enforced modification of behavior toward the attitude object.

The relationship between cognitions and beliefs, though conceptually valid, has not been fully borne out in prior research on blindness. Students sharing common learning experiences concerning the blind as well as frequency of interaction through practicum contact may be inferred to constitute a reference group and share similar

attitudes. Likewise those students compelled to interact with the blind in the fulfillment of their educational requirements should show greater change in attitudes than those who do not have such contact. This consideration may not apply to those who already hold strong feelings deriving from earlier life or work experience.

Hypotheses

Based on the above principles and assumptions, the following hypotheses will be tested:

1. Moderately unfavorable attitudes and limited knowledge will be demonstrated in beginning students whose degrees of contact and meaningful social life experience with the blind is minimal or non-existent.
2. Beginning students who have had previous meaningful social life experiences with the blind will demonstrate extreme attitudes, at either pole, as well as extremes of knowledge that is distorted or accurate.
3. Minimal changes in knowledge and attitudes will be evidenced by the terminating group with little or no exposure in the curriculum; whereas more change will be evidenced by those with exposure through class or field teaching.
4. Students who have direct contact with the blind persons as part of their educational experience will demonstrate greater attitude change, either positive or negative, in knowledge increments than those with exposure through formal course work.
5. Terminating students with previous meaningful social life

experiences with the blind will not demonstrate significant attitude change through educational exposure.

6. Terminating students with practicum experience in blindness will share a common level of knowledge and attitudes about blindness, distinct from the general student body.

CHAPTER IV

METHODOLOGY AND PROCEDURES

The basic objective of this research is to assess the effect that the educational experience has on the knowledge and attitudes of special education students toward blindness. This study defines blindness as: visual acuity in the better eye with best correction of 20/200 or less. Even if visual acuity exceeds 20/200, the person is classified blind if the visual field is restricted to 20 degrees.¹ As formulated in Chapter III, information is not the only factor that causes attitudinal change. It is possible that other factors are socio-economic, such as age, sex, marital status, religion, occupation, etc. The events prior to the graduate school experience are more important to the testing of the hypotheses, because they are presumably more apropos to attitude formation. These variables have been designated as the personal life experiences with those who are blind, both within the family and in the educational experiences with the students. In the process of the analysis, these factors are treated both as independent and dependent variables. The major independent variables, which are determined by the amount of exposure to knowledge, the nature of the learning experience, and the origin of the information, are related to the curriculum. These basic views and factors are to be incorporated in the study design which is to follow.

¹National Institute of Neurological Diseases and Blindness, Office of Biometry, Section on Blindness Statistics, Statistics for 1966 on Blindness in Model Reporting Area (U. S. Dept. of Health, Education, and Welfare, Public Health Services, National Institute of Health, 1967), p. 2.

Research Design

This research compares the components of knowledge, beliefs, and action tendencies of special education students at both the beginning and the graduating points of their educational experience. This research used a synthetic-cohort analysis, which is basically a cross-sectional approach treating the data in a longitudinal manner to elicit the various aspects of change. The utilization of this method was predicated upon socio-economic limitations as well as the unique time lapse within the educational processes of the differing institutions. There is also the possible problem in a test-retest bias, which this design minimizes.

The utilization of the cross-sectional technique is based on the assumption of similarity within the two populations, beginning and graduating students. Inasmuch as the two groups differ only in some two years from entrance to graduation, it was assumed that no major difference would appear. The possibility that those students who entered later have been introduced to better information concerning blindness is recognized. Other research data concerning this phenomena points to such an effect as having to take place over a longer period and that such an effect would be minimal in so short a time lapse as the educational experience as here tested. It may be noted that various mass media communication studies dealing with blindness indicate only minimal change among the general public.

Table 1 supports the basic assumption of a high similarity among the two groups studied. Though there is a slight difference in

TABLE 1

FREQUENCY DISTRIBUTIONS OF CHARACTERISTICS OF BEGINNING
AND GRADUATE SPECIAL EDUCATION STUDENTS

Characteristics	Student Status	
	Beginning (n = 252)	Graduating (n = 182)
Age		
Less than 25	118	62
25 - 35	113	87
More than 35	21	33
Sex		
Male	70	44
Female	182	138
Marital Status		
Married	136	96
Single	116	86
Children		
Yes	68	55
No	55	127
Religion		
Protestant	146	113
Catholic	55	32
Jew	14	12
Non-Christian	5	6
None	32	19
Personal Life Experience with the Blind and their Relationship to Them		
Meaningful Experience		
Yes	89	88
No	163	94
Type of Relationship		
Immediate Family	7	8
Neighbor	8	15
Close Relative	7	6
Close Friend	23	4
Passing Acquaintance	52	57
Professional Special Education Experience		
Years of Professional Special Education Experience		
None	148	40
Less than 2	56	63
2 - 5	41	56
More than 5	7	23

Table 1 continued--

Characteristics	Student Status	
	Beginning (n - 252)	Graduating (n - 182)
Blind Pupils in Professional Experience		
None	191	104
Less than 5	37	42
5 - 10	10	1
More than 10	14	35
Father's Occupation		
Dead	6	0
Unskilled Manual Laborer	35	44
Skilled Manual Laborer	53	42
White Collar	80	45
Professional and Managerial	78	51
Parent's Income		
Under \$7,500	34	37
\$ 7,500 - \$10,000	65	41
\$10,001 - \$15,000	67	43
\$15,001 - \$20,000	44	26
\$20,001 and over	42	35

age, marital status, number of children, the data shows a clear and obvious similarity. The age difference, as well as the somewhat larger number of personal life experiences among the graduate group, can be readily explained by the time lapse in the educational experience.

All students were given the same questionnaire, which included a cognition test, semantic differential scales, and a preferential ranking scale with socio-economic variables included through the personal data sheet. Though some overlap undoubtedly exists, the cognition test, semantic differential scales, and the preferential ranking scale, were designed to correspond with the cognition, beliefs, and action tendencies and/or contact with those who are blind. Both beginning and graduate students were compared on mean knowledge scores,

mean semantic ratings, and mean preferential ranking order scales. In-group comparison on demographic and personal characteristics are made on graduate students. These factors are then related to the dependent variables previously discussed. Analysis is made of those graduate students who were placed in teaching practicums which served primarily blind students. A comparison with beginning students on this level would be difficult, since the practicum is part of the educational curriculum and is usually part of the graduate program. Groups of students are then compared with each other primarily on their past life experiences and curricular variations in experience with the blind.

A check question was formulated in which the graduate students were asked whether they would have ranked the blind differently at the beginning of their school experience. The computation of these results were assumed to indicate both the change of attitude as well as the direction thereof. These were analyzed in terms of prior life experiences and educational variables. The personal data sheet was so formulated as to illicit the information that would be most appropriate for each group of students. The questionnaires were designed to be self-administered and every effort was made to have the schedules quickly taken and returned. Computer programs were used where applicable to assist in the analysis. Statistical techniques were utilized to point out the significance of differences between and within groups. The point .05 level of significance was accepted for all such testing. All of the instruments and procedures were pre-tested on a beginning

group of students. Changes were made when the questionnaires needed more clarity, discriminatory power, and ease of completion.

Selection of Population

The graduate schools from which this group of special education students were drawn are accredited universities. The schools have various differences in size, such as, student enrollment, ratio of students to faculty, range in quality of practicum and supervision, and faculty qualifications as well as other dimensions concerning content and quality of instructional processes. With respect to the content concerning blindness, range of variation within the curriculum could possibly be greater. Some of the universities have extensive federal grants allowing for a more thorough and complete inclusion of knowledge and facts about blindness to be integrated through the curriculum. In some cases specific teachers have been so designated to incorporate materials on blindness into the classroom teaching process. Some of these schools place their special education students within situations which serve primarily or only the blind. It has been found that in general some special education departments have been incorporating more information regarding blindness in the curriculum and communicating this knowledge through the use of case studies, audio-visual materials, lectures, and bibliographic materials. In some cases the range is quite large.

In this study to accentuate the characteristics of a specialized faculty and curriculum, a purposive sample was drawn of the universities to approximate a high exposure school as well as a low exposure.

Because the total population was numerically accessible it was felt that a more adequate and representative knowledge level would be attained through the examination of the additional cases. This researcher contacted each university chairman of the special education department and solicited his help. The chairman, after a discussion of the research and its objectives and procedures, would either assume full responsibility, or would delegate it to a research assistant, who in turn was responsible for the acquisition of the population list and the distribution and follow-up of the questionnaires. The questionnaires were distributed starting in the summer of 1971 and concluding in August 1972. Three universities were grouped as low exposure and two universities as high exposure. A breakdown of the returns of these schools is given in Table 2.

TABLE 2
BREAKDOWN OF RETURNS

Group	No. Sent	No. Returned	% Returned
Low Exposure	250	241	97
Beginning	141	134	95
Graduating	109	107	98
High Exposure	238	212	89
Beginning	133	126	95
Graduating	105	86	82
Total	488	453	93

Nineteen of the questionnaires were discarded, giving a final number of 434. Eight of these discards were from the beginning

students with eleven from the graduating class. The nineteen discards were primarily because of lack of completion of the questionnaire, with only one giving invalid answers.

Instrumentation

Three instruments were used. To measure cognition, the knowledge inventory was devised. It consisted of fifty multiple-choice questions. Each item was weighted two points, giving the entire list a total of one hundred. In the development of the list specific focus was made on the student's understanding of the phenomena. The special characteristics and abilities, as well as the unique needs of the blind were embodied with the changing concepts in care and education. Though questions of cause and manifestation were used, the use of specific factual questions were limited. The goal was to evaluate those areas of cognition which indicate the student's perception and understanding of the problem, and therefore, his assessment of the blind as a potential pupil capable or incapable of benefiting from the skills of special education.

The questions in the inventory were derived from a review of the professional literature with emphasis on the suggestions of experts in the field. These experts were not all teachers; some were researchers, social workers, and administrative personnel in various capacities serving the sightless. Validity of the knowledge list was attained by its submission to an expert panel of eleven members. A total of sixty-seven original questions were submitted. The fifty items on which the panel were in major agreement for clarity and discriminative power

became the final inventory. Reliability was derived from the use of the split-half method, dividing the questions into even and odd numbers. Forty special education students from a school not tested in this study, but similar to the low exposure group, were given the knowledge inventory. The full test was taken by this group, yielding a moderately high correlation of .60.

To measure feelings, or what is termed beliefs, the semantic differential scales as developed by Osgood and his associates were used.² These scales consisted of twenty bipolar adjectives to measure six concepts. These six concepts, Mentally Retarded, Average Person, Emotionally Disturbed, Blind, Myself, and Deaf, represent major pupil groups with whom special education teachers work and could therefore give meaningful comparative information on student attitudes. These same categories serve as a core to the preferential ranking scale. This allows for a measure of the correlation between the attitudes revealed by the semantic differential test and the action tendencies revealed through the preferential ranking scales. For a baseline, the categories Average Person and Myself are used to compare ratings on the blind.

Two other considerations are clarified by the use of these concepts. First, it allows the student a frame of reference in his scaling of the blind. Second, the absolute mean values of the bipolar adjective ratings allow for some approximation along a favorable-unfavorable

²C. E. Osgood, The Measurement of Meaning (Urbana: University of Illinois Press, 1957).

continuum. These might have less significance than its relative mean value compared to other population groups. It is especially important that relative values be assessed since pupil preference will be determined by such evaluation.

In their description of semantic space, factor analytic work on semantic differential data indicates a high degree of consistency among the factors of evaluation, activity and potency. In this research, ten scales were used to index these three factors. Each of the factors have been found by Osgood, et al., to be weighted on the appropriate factor. Another ten bipolar adjectives were chosen to illustrate the characteristics that differentiate the blind from other groups. These were chosen from both popular and technical literature on the sightless. These scales are grouped into three areas: social stimulus value; physical health; and psychological attributes (also described by Osgood, et al.).

Table 3 shows the twenty bipolar adjective scales classified by the factor or area they are used to index. Some adjectives, though used in other studies, were deleted from this research, because the meaning was not inherent in the definition of blindness. Adjectives specified within the cluster were found to be not entirely homogeneous. However, ratings are generally in the same direction and more important, statistical comparisons of mean values by adjective or factor-area yield, with few exceptions, the same distinctions between students according to the variables tested. Therefore, tests of significance are handled largely on a factor-area basis, though adjectives are used where more detailed analysis of specific meanings are desired.

TABLE 3

TWENTY BIPOLAR ADJECTIVE SCALES OF THE SEMANTIC
DIFFERENTIAL CLASSIFIED BY FACTOR AND AREA

Factor Classification	Area Classification
<u>Factor 1 - Evaluation</u>	<u>Factor 4 - Social Stimulus</u>
Valuable-Worthless	Easy to get along with-Difficult to get along with
Useful-Useless	Beautiful-Ugly
Good-Bad	Neat-Untidy
Kind-Cruel	Self-reliant-Dependent
Clean-Dirty	Reliable-Unreliable
<u>Factor 2 - Activity</u>	Not-dangerous-Dangerous
Deep-Shallow	<u>Factor 5 - Health</u>
Strong-Weak	Healthy-Sick
<u>Factor 3 - Potency</u>	<u>Factor 6 - Psychological Attributes</u>
Active-Passive	Happy-Sad
Motivated-Aimless	Calm-Emotional
Predictable-Unpredictable	Intelligent-Not intelligent

The pupil preferential ranking scale is predicated on face validity. It is a clear measurement of student choices of the pupil groups with whom they would like to work. Those groups were selected that represent major fields of special education students. The ranking of blind as between beginning and ending students and within the latter group according to differences in educational experience are intended to provide a measure of change in action tendencies.

Treatment of Data

In analyzing the data, comparisons are made between the high and low exposure groups of students or within the terminating group on

antecedent life experiences, demographic-personal variables, and variations in the educational instruction and placement of students. Independent variables are cognition, attitudes, and action tendencies as reflected in the cognition list, semantic differential, and the client preference rank order.

The data are analyzed by two statistical methods: t-tests of significance and coefficients of correlation. Where two values are used in comparison of means, t-tests are performed. In determining the numerical extent of changes in pairs of variables, coefficients of correlation are used. All computation in the present study are made at the .05 level of significance or above.

Coefficients of correlation are utilized to determine the statistical relationship between the knowledge levels, semantic differential ratings, and preference rank orders. It is important to note that the correlation coefficient measures only the association between two variables, and does not indicate a cause and effect relationship.

It is important to note that tests (of t-tests when $k = 2$) are applied to compare sample means and variance, not those of the population as a whole. Analysis of variance tests are based on the assumptions that the populations from which the samples have been drawn are normally distributed, the population variances are equal, and that cases from samples representing the populations have been randomly selected.³ Population variances are, of necessity, usually regarded

³Clinton I. Chase, Elementary Statistical Procedures (New York: McGraw-Hill Book Company, 1967), p. 170.

as normal without involved testing due to the logical impossibility of full determination of population status. In applying comparative tests on means, such as in analysis of variance, this may be justifiable due to the evidence that comparative tests are relatively insensitive to variations in distribution of the population. This is in line with the general principle that sample means approach normality even when parent populations are not normal in their distribution.⁴

The statistical model employed for expressing hypothesis deals with a statement of differences, hypothesizing that a sample mean is not different from the population mean at a pre-determined level of significance. If the sample mean is not significantly different from the parent population value (i.e., the difference between the means is zero or below the statistical level of the significance set), statistical predictions are in order. However, if the sample mean is significantly different from the population mean, we reject the hypothesis and assume that it is remote that the sample is from the particular population. The hypothesis, stated statistically, is known as the null hypothesis.

⁴J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Company, 1965), p. 301.

CHAPTER V

PRESENTATION AND ANALYSIS OF RESEARCH

The results of this research project allow for a broad spectrum of analysis. Each variable in its unique way, represents a possible salience to the evaluation of attitudes, and affects to some degree, the hypotheses. In some earlier studies, for example, personal and socio-economic data have delineated sub-groups concerning their attitudes toward the blind. Also the respondent's level of education, though not a factor in this research since they are similar, is assumed to be related to level of knowledge and is therefore related, by assumption, to attitudes.

This research will also evaluate the possible confounding effects of personal and socio-economic factors, thus allowing for more appropriate evaluation of the impact of the curriculum experience on attitudinal change and its suggested relationship to work and prior life experiences. Thus a comparison with previous research as well as an evaluation of whether special education students vary in any respect from the general student population will be assessed. Comparisons such as these allow for a greater generalizability with the results obtained.

The research sought to point out and analyze the most appropriate and meaningful data. Various methods were utilized, such as measures of association as well as measures of differences between and

within groups. The specific statistical techniques utilized were chosen as appropriate to the instruments as well as for the particular assumptions of that test.

In reporting the general analysis of research, this outline was followed:

A. Analysis of research according to personal and socio-economic variables.

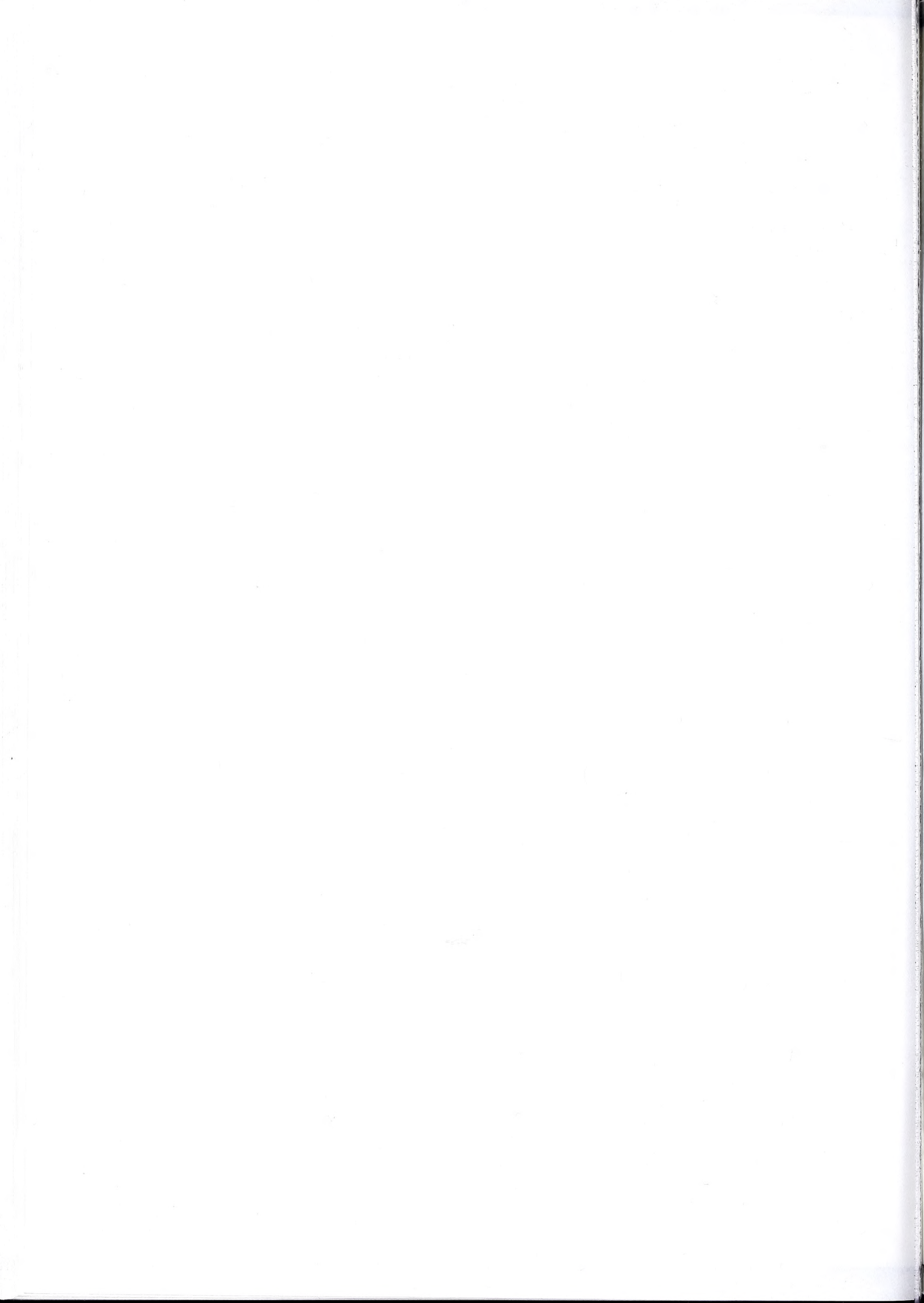
1. Age
2. Sex
3. Marital Status
4. Children
5. Religion
6. Parents' Education
7. Parents' Income

B. Analysis of data by hypotheses and between and within group comparisons on independent variables of personal life experience, work experience, and type of curriculum exposure.

C. Analysis of relationship between cognitions, beliefs, and action tendencies.

Personal and Socio-economic Data

The characteristics of the graduate special education students are identified in Table 1 (p. 64). Upon entry into graduate school, 47 percent are under age twenty-five, 45 percent between twenty-five and thirty-five, and 8 percent over age thirty-five. These percentages appear to shift between the three age groups during the educational



experience, suggesting that many students enter the school between twenty-three and twenty-five years of age. Seventy-four percent of the students are female, with little shift in the marital status during graduate work.

The socio-economic status of the families of students indicates that 70 percent of the parents have high school education or more, and that 41 percent have incomes under \$10,000 per year. Thirty-three percent state father's occupation as white collar or professional and managerial. A significant proportion of the students (40 percent) report prior life experience with blind persons, though it should be noted that these contacts are predominantly with passing acquaintances (59 percent). A small percentage (8 percent) have blind family members, with 7 percent having blind close relatives; there were 14 percent who were close friends and 12 percent who had contact with blind neighbors. It may be assumed that this presents a high degree of closeness or feeling within the relationship.

The analysis of the relationship between socio-economic and personal characteristics and attitudes are here presented for the graduating group only. It was felt that though the variables affected to a degree attitude formation, the overall effect on attitude change was nonsignificant. Previous studies¹ have suggested that females have a higher level of suggestibility, and therefore, are more susceptible to change. The rest of the socio-economic variables were felt to have little effect; however, to test this assumption, trial computations

¹Lukoff and Whiteman, "Attitudes Toward Blindness in Two College Groups," pp. 179-191.

were made on age, sex, marital status, children, religion, parents' education, and parents' income for beginning students also. The results were very similar to those of the graduating group and for that reason are not included in this portion of the analysis.

Both semantic differential ratings and pupil preference rank order scales are considered measurements of social attitudes. The tables below will relate these measurements to the impact of personal and socio-economic variables.

The data indicate that those who are thirty-five or under are more positive with a trend toward the negative by the older group in each of the six factors (see Table 4). The oldest group in relationship to the youngest group showed a significant level of difference on Factor 1 of .001 and on factors 2 and 4 of .05. Sex was not a differentiating factor. The trend toward more favorable attitudes on semantic scales by the females was as previously expected. On the other hand, the scales (easy to get along with-hard to get along with, beautiful-ugly, kind-cruel, and clean-dirty) tended toward the negative. These scales might suggest a somewhat negative view on the part of the females to work with the blind. On the pupil preference rank order scale (Table 5), the age relationships show a slight reversal to those shown on the semantic differential, though not reaching statistical significance.

On both factor and rank order scale (Tables 6 and 7), the impact of marital status is non-significant. Yet for students with children, significant differences are noted at the .01 level or above on all of the factors except for factor 5, and the factors are all in

the negative direction (Table 6). With the pupil rank order scale there is no significance (Table 7).

TABLE 4

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING
TO AGE AND SEX FOR GRADUATING STUDENTS

Factor	Age				Sex		
	a Less than 25	b 25-35	c More than 35	t*	Male	Female	t**
1 Evaluation	2.55	2.65	2.95	(a,b)-(c)	2.77	2.63	1.45
2 Activity	3.03	3.20	3.38	(a)-(c)	3.30	3.13	1.28
3 Potency	3.22	3.26	3.43	N.S.	3.32	3.25	0.51
4 Social Stimulus	3.07	3.05	3.28	(a,b)-(c)	3.10	3.09	0.06
5 Health	3.16	3.18	3.21	N.S.	3.28	3.14	0.65
6 Psychological Attributes	3.14	3.21	3.39	N.S.	3.28	3.19	0.73

* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

** = .05 level of significance or above.

TABLE 5

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND ACCORDING
TO AGE AND SEX FOR GRADUATING STUDENTS

Grouping	Number	Mean Rank	df	t*
Age				
a. Less than 25	62	4.19	142	a-b = 1.67
b. 25-35	82	3.67	90	a-c = 1.20
c. More than 35	30	3.70	110	b-c = -.07
Sex				
Male	40	3.35	172	-1.77
Female	134	4.01		

* = .05 level of significance or above.

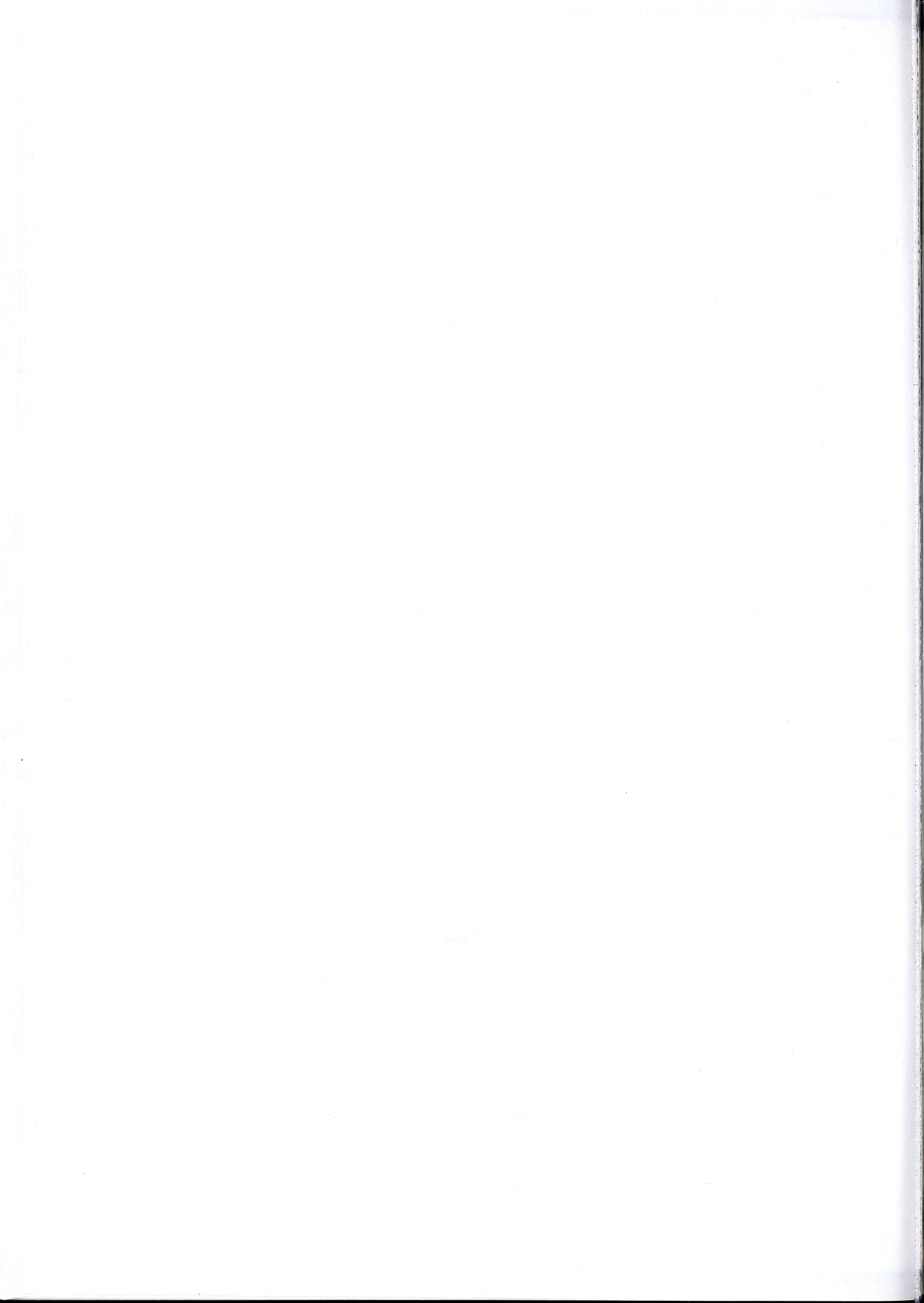


TABLE 6

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND
 ACCORDING TO MARITAL STATUS AND CHILDREN
 FOR GRADUATING STUDENTS

Factor	Marital Status			Children		
	Married	Single	t*	Yes	No	t*
1 Evaluation	2.67	2.65	0.31	2.86	2.58	3.45
2 Activity	3.19	3.15	0.54	3.39	3.07	2.87
3 Potency	3.23	3.32	-0.90	3.46	3.20	2.66
4 Social Stimulus	3.07	3.12	-0.66	3.25	3.02	3.00
5 Health	3.09	3.26	-1.01	3.25	3.14	0.68
6 Psychological Attributes	3.20	3.23	-0.24	3.42	3.13	2.92

* = .05 level of significance or above. (Factors 1,2,3,4, and 6 for children).

TABLE 7

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND
 ACCORDING TO MARITAL STATUS AND CHILDREN
 FOR GRADUATING STUDENTS

Grouping	Number	Mean	df	t*
Marital Status				
Married	90	3.89	170	0.25
Single	82	3.81		
Children				
Yes	53	3.96	169	0.36
No	118	3.86		

* = .05 level of significance or above.

Religious affiliation and attitudinal factors indicate these trends (Table 8): The non-Christian group was more negatively inclined than all other categories and to a significant level in most comparisons.

Some of the tests indicate that Protestants were significantly more negative than the no religion group. The most positively inclined were the no religion group; Catholic, Jew, and Protestant were fairly similar. With the pupil rank order scales no significant trend is developed, though the non-Christian shifts to more positive than the other groups (Table 9).

TABLE 8

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND
ACCORDING TO RELIGIOUS AFFILIATION
FOR GRADUATING STUDENTS

Factor	a Prot- estant	b Cath- olic	c Jew	d No Reli- gion	e Non- Chris- tian	Between Group Comparison*
1 Evaluation	2.66	2.49	2.92	2.69	3.33	(a,b,d)-(e); (b)-(c)
2 Activity	3.21	3.05	3.21	2.97	3.83	(a,b,c,d)-(e)
3 Potency	3.34	3.24	3.03	2.93	3.78	(c,d)-(e); (a)-(d)
4 Social Stimulus	3.17	2.95	3.03	2.83	3.50	(a,b,c,d)-(e); (a)-(b,d)
5 Health	3.23	2.94	3.33	3.00	3.83	(b)-(e)
6 Psycho- logical Attributes	3.30	3.01	3.22	2.93	3.78	(a,b,c,d)-(e); (a)-(b,d)

* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

The attitudinal scales, both semantic differential and rank order (Tables 10 and 11), indicate the father's role as totally non-significant on all factors. There is a comparable similarity with the mother on Table 11. Only category 12 (high school) approaches statistical significance on some factors.

TABLE 9

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND
ACCORDING TO RELIGIOUS AFFILIATION
FOR GRADUATING STUDENTS

Religion	Number	Mean	Between Group Comparison
a Protestant	111	3.86	N.S.
b Catholic	30	4.00	N.S.
c Jew	12	3.58	N.S.
d No Religion	7	3.57	N.S.
e Non-Christian	6	3.33	N.S.

* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

The economic categories are variously scattered over the semantic differential (Table 12), with no consistent trends discernible. Income categories also fail to discriminate on pupil preference scales (Table 13).

The previous analyses of special education students' attitudes toward blindness in relationship to their socio-economic and personal characteristics are as follows:

1. Age, sex, and marital status of students are generally not significant; older students tend toward more negative attitudes and those with children reach levels which are significantly more negative. The sex of the student does not affect attitudes.

2. The no religion group, though somewhat more positive, is similar to Catholic, Jew and Protestant, which are closely associated. The category non-Christian is always more negative on the semantic

TABLE 10
SEMANTIC DIFFERENTIAL MEAN RATING OF THE BLIND
ACCORDING TO PARENTS' EDUCATION
FOR GRADUATING STUDENTS

Factor	Father**				Mother				Between Group Comparison*
	a <12	b 12	c 12-16	d 17+	e <12	f 12	g 12-16	h 17+	
1 Evaluation	2.56	2.69	2.70	2.71	2.58	2.55	2.75	3.01	(e,f)-(h);(f)-(g)
2 Activity	3.22	3.21	3.21	3.04	3.36	3.06	3.24	3.08	(e)-(f)
3 Potency	3.40	3.26	3.23	3.11	3.44	3.13	3.36	3.20	(e)-(f)
4 Social Stimulus	3.10	3.10	3.06	3.09	3.16	2.92	3.22	3.22	(e,g,h)-(f)
5 Health	3.23	3.13	3.19	3.07	3.21	2.99	3.39	3.23	(f)-(g)
6 Psychological Attributes	3.23	3.21	3.22	3.24	3.26	3.05	3.39	3.38	(f)-(g)

* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

** = Between group comparison on Father's Education is not significant.

TABLE 11

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND ACCORDING
TO PARENTS' EDUCATION FOR GRADUATING STUDENTS

Parents' Education	Number	Mean	Between Group Comparison*
Father			
a <12	48	3.79	N.S.
b 12	44	4.32	
c 12-16	43	3.60	
d 17+	25	3.56	
Mother			
e <12	30	3.67	N.S.
f 12	70	3.97	
g 12-16	48	3.94	
h 17+	13	3.31	

* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

TABLE 12

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING
TO PARENTS' INCOME FOR GRADUATING STUDENTS

Factor	Parents' Income**					Between Group Comparison*
	a <7,500	b 7,500- 10,000	c 10,001- 15,000	d 15,001- 20,000	e >20,000	
1 Evaluation	2.71	2.90	2.59	2.86	2.32	(a,b,c,d)-(e);
2 Activity	3.15	3.41	3.03	3.31	3.00	(c,e)-(b)
3 Potency	3.33	3.52	3.18	3.38	2.97	(a,b,d)-(e); (b)-(c)
4 Social Stimulus	3.14	3.34	2.95	3.28	2.81	(a,b,d)-(e); (b,d)-(c)
5 Health	3.22	3.37	3.09	3.19	3.03	N.S.
6 Psychological Attributes	3.19	3.46	3.08	3.20	3.15	(c,e)-(b)

* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

**In dollars.

TABLE 13

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND
ACCORDING TO PARENTS' INCOME
FOR GRADUATING STUDENTS

Parents' Income	Number	Mean	Between Group Comparison*
a <\$7,500	34	3.62	N.S.
b \$7,501 - \$10,000	39	4.13	
c \$10,001 - \$15,000	43	3.79	
d \$15,001 - \$20,000	24	4.37	
e >\$20,000	34	3.53	

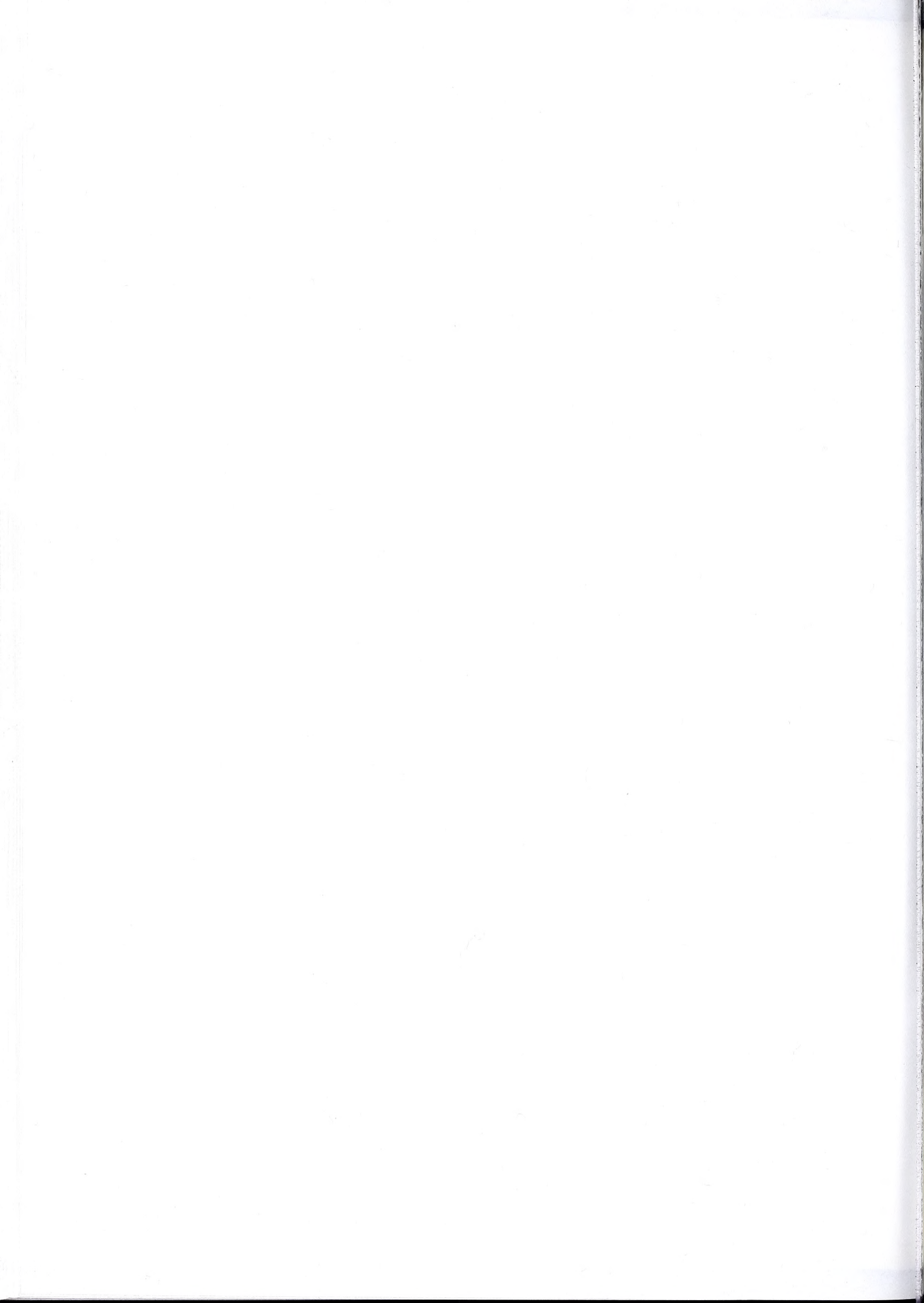
* = Variable(s) in the first parentheses are statistically significant at the .05 level or above to the variable(s) in the second parentheses.

differential, often to a significant level.

3. Education and income, considered as socio-economic status, is non-significant in the areas of the father's relationship on semantic differential and both mother and father on pupil preference. Mothers with high school education are more positive on all six factors, in some instances reaching significance. The pupil preference rank showed no significance.

Analysis of Data by Hypotheses

Assessment of the previous personal and socio-economic variables indicate a weak and tenuous relationship to attitudes (except for the semantic differential in the areas noted). The limited significance alluded to will lend confidence to the proposition that attitude change, if any, will result from the interaction of prior life experience



and the nature of the educational experience. Prior factors bearing on the formation of attitudes will be evaluated for their impact. Thus, variables associated with personal life experience and contact with the blind are utilized as both dependent and independent variables in examination of the research which follows.

Hypothesis No. 1

Moderately unfavorable attitudes and limited knowledge will be demonstrated in beginning students whose degrees of contact and meaningful social life experience with the blind is minimal or nonexistent.

Special education has a tendency to attract students who are highly motivated to work with handicapped groups. By the very nature of the special education experience individuals would have to have a very high level of personal altruism toward deprived groups whether physically or emotionally handicapped. This segment of academia has constantly to contend with the bias of the general public and it was assumed by the hypothesis that the beginning students with little contact would reflect similar views.

Other studies on different client groups have indicated that those students with little or no contact have shown a moderately negative attitude on the semantic differential.² The students studied in this project have shown a reversal of this trend, rating the blind significantly positive on two factors, three and six, at the .01 and

²Michael J. Begab, The Effect of Differences in Curricula and Experiences on Social Work Student Attitudes and Knowledge about Mental Retardation (U. S. Dept. of Health, Education, and Welfare, Public Health Service, Institute of Child Health and Human Development, 1968), p. 63.

.001 level respectively, with a positive trend on the other four factors (Table 14). The population in this study may well be biased in a positive direction. One could speculate that the students with limited contact, like some segments of the general public, identify the blind with certain cultural heroes, such as Helen Keller, Jose Feliciano, Templeton, etc. This, then, presents a unique factor in the analysis of the data, the influence of a possible unique cultural ideal concept of blindness. Given these favorable attitudes, there is a great likelihood of a ceiling effect. The evaluation of the blind at such a high level restricts the potential for attitude change (Figure 1). Of the 252 students examined, the level of high positive response was recorded on sixteen out of the twenty bipolar adjectives, with thirteen on a level of significance of .05 to .001.

TABLE 14

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING
TO CONTACT AND NO CONTACT WITH THE BLIND
FOR BEGINNING STUDENTS

Factor	Contact	No Contact	t*
1 Evaluation	2.30	2.24	0.94
2 Activity	2.30	2.17	1.25
3 Potency	2.51	2.27	2.66
4 Social Stimulus	2.80	2.74	1.01
5 Health	3.07	2.93	0.96
6 Psychological Attributes	3.21	2.92	3.45

* = .05 level of significance or above (Factors 3 and 6)

Inasmuch as the evaluation of different client groups is predicated on relative frames of reference, baseline data was elicited by

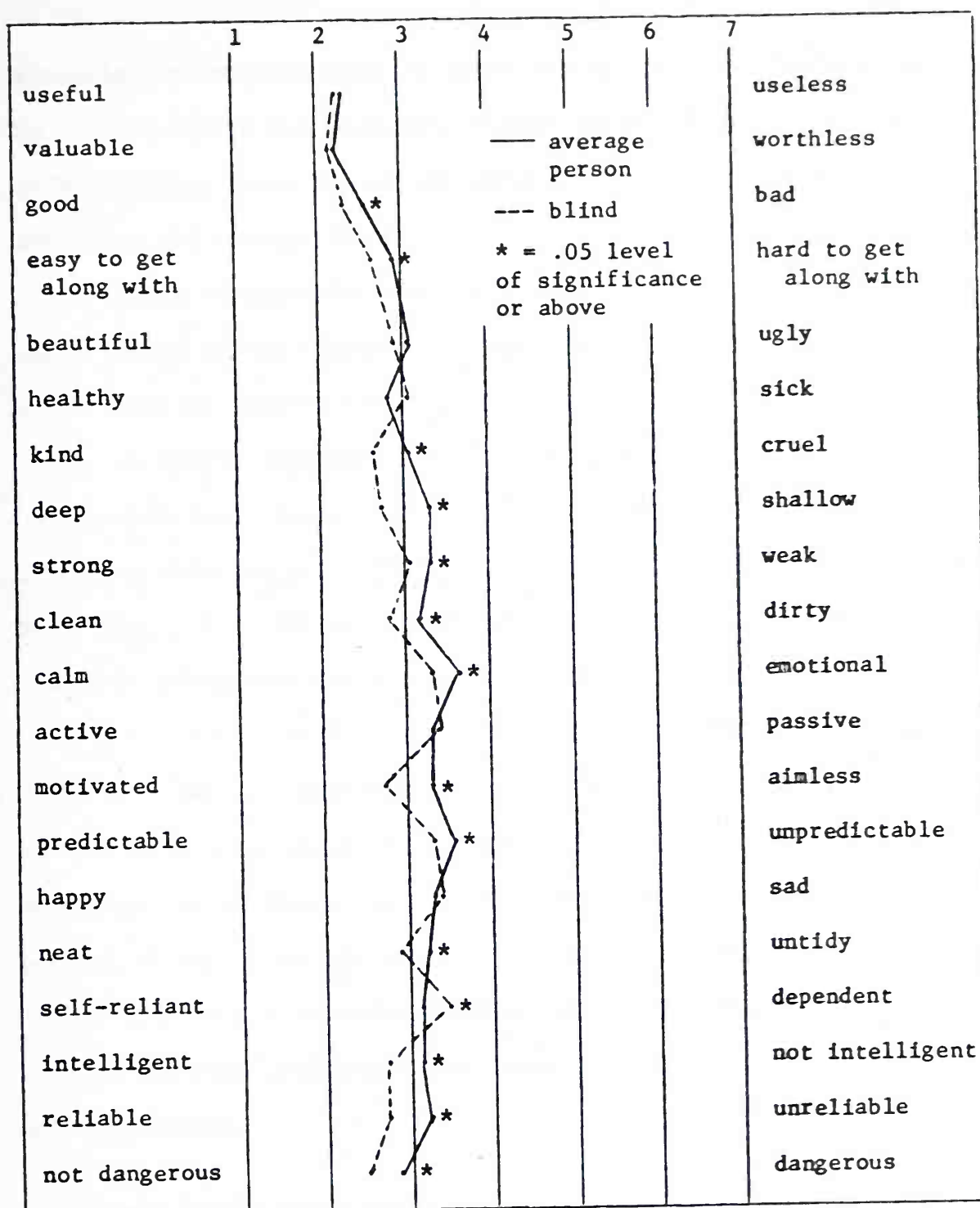
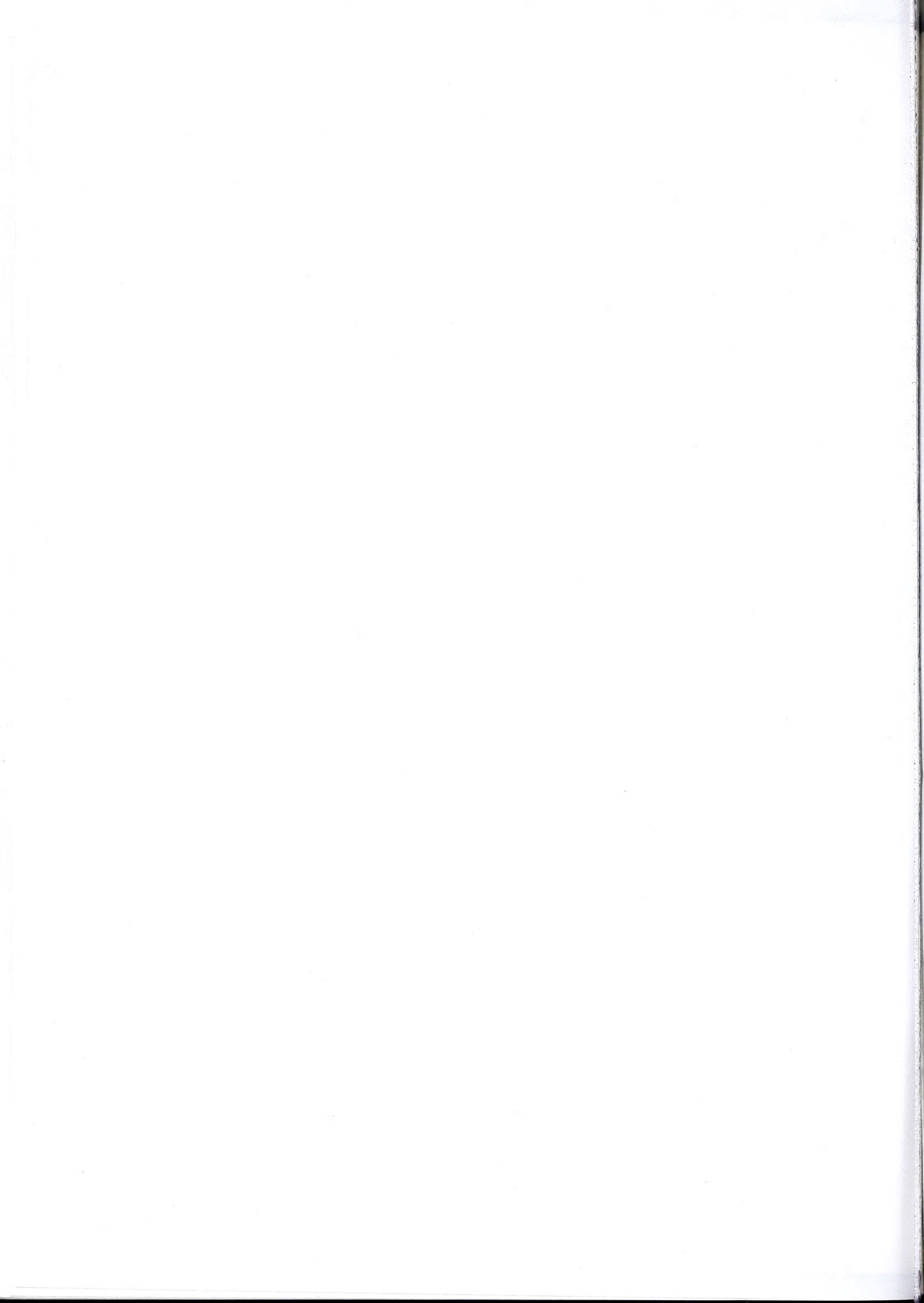


Fig. 1. Semantic differential mean ratings of the average person and the blind for beginning students.



the use of the average person in the semantic differential to more appropriately evaluate semantic space (Table 15). As a further check, the concept Myself was inserted. Though the blind were rated a majority of times above the average person, it was always significantly lower than the concept Myself.

Table 16 indicates that those with little or no contact were skewed toward a less favorable attitude, which was significantly different from the contact group at the .001 level.

It may be interesting to observe that while in the pupil preference mean rank, the position of the blind is second (Table 17), it is evident from the distribution that the largest segment places them third (Table 18). Those findings are consistent with the students' favorable ratings on the semantic differential scales.

It is posited that having no contact with the blind would limit the level of information or knowledge of that group. This is exhibited clearly in Table 19. Using a score of fifty as the midpoint, 58 percent of the contact group are above this level, whereas only 45 percent of the no contact group score in this knowledge range.

The data as revealed on these tables, particularly in relationship to the pupil preference rank order and knowledge scores, supports this hypothesis.

Hypothesis No. 2

Beginning students who have had previous meaningful social life experiences with the blind will demonstrate extreme attitudes, at either pole, as well as extremes of knowledge that is distorted or accurate.

TABLE 15
SEMANTIC DIFFERENTIAL MEAN RATINGS OF ALL
SEMANTIC CONCEPTS FOR BEGINNING STUDENTS

Factor	a Mentally Retarded	b Average Person	c Blind	d Emotionally Disturbed	e Myself	f Deaf	Between Group Comparison*
1 Evaluation	2.59	2.67	2.48	3.16	2.06	2.46	(a)-(b); (c)-(f)
2 Activity	2.42	3.33	2.95	3.44	2.61	2.93	(a,d)-(b); (a)-(d);(c)-(f)
3 Potency	3.61	3.29	3.09	4.12	2.48	3.09	(c)-(f)
4 Social Stimulus	3.39	3.07	2.89	4.05	2.29	2.92	(c)-(f)
5 Health	3.55	2.90	3.04	3.77	2.05	2.91	(a)-(d);(b)-(c,f);(c)-(f)
6 Psychological Attributes	3.95	3.32	3.11	4.35	2.56	3.14	(c)-(f)

* = Variable(s) in the first parentheses are NOT statistically significant at the .05 level or above to the variable(s) in the second parentheses. All others are statistically significant at the .05 level or above to each other.

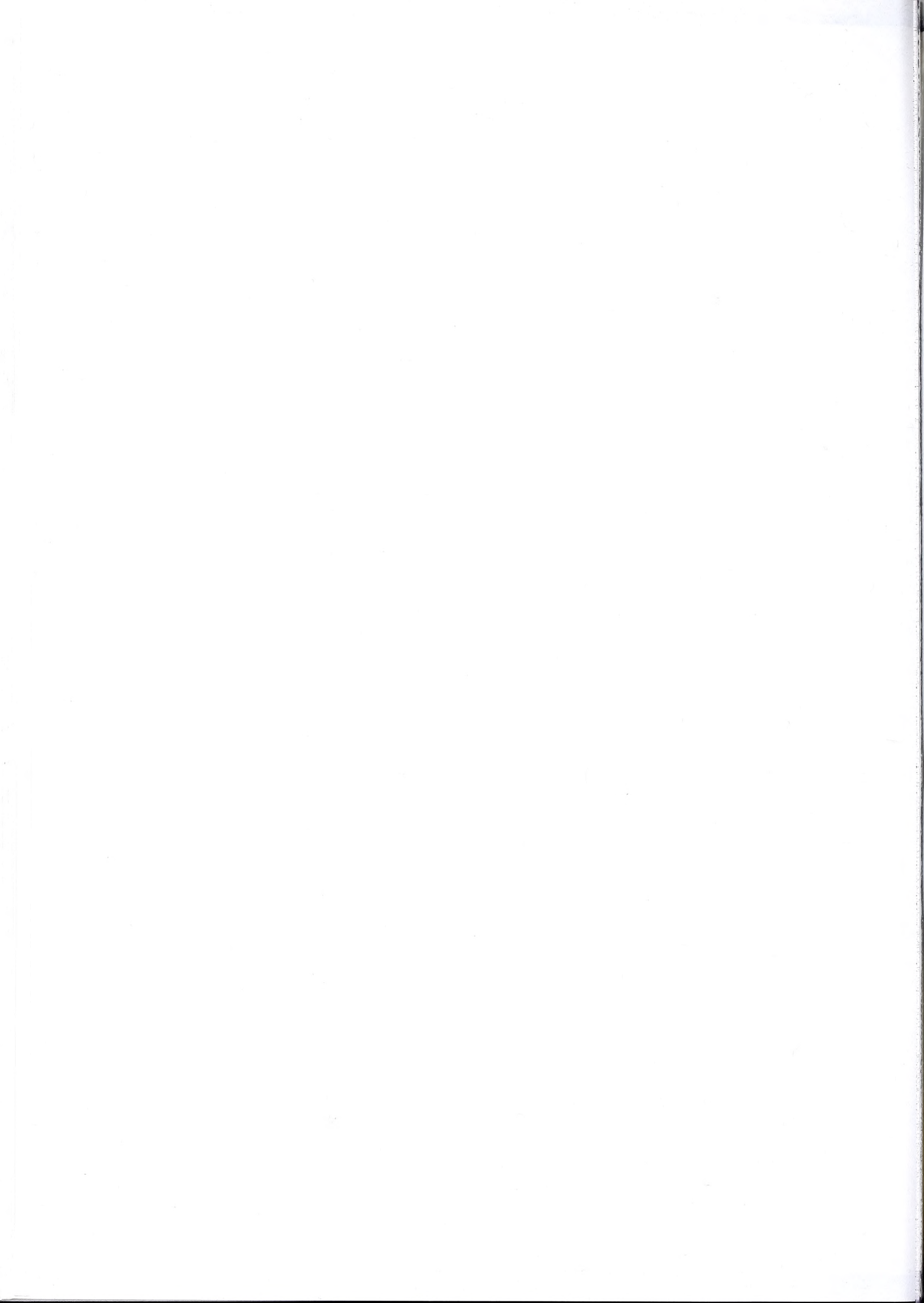


TABLE 16

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND
ACCORDING TO CONTACT AND NO CONTACT WITH
THE BLIND FOR BEGINNING STUDENTS

	Contact	No Contact	t*
Pupil Preference Mean Rank of Blind	3.21	4.22	-4.59*

* = .05 level of significance or above

TABLE 17

PUPIL PREFERENCE MEAN RANK ORDER OF SELECTED GROUPS
FOR BEGINNING STUDENTS

Pupil Group	Mean
Mentally Retarded	3.24
Blind	3.72
Emotionally Disturbed	3.85
Speech Impairment	4.01
Deaf	4.08
Gifted	4.18
Cerebral Palsy	4.89

TABLE 18

FREQUENCY DISTRIBUTION OF PUPIL PREFERENCE RANKINGS
OF SELECTED GROUPS FOR BEGINNING STUDENTS

Pupil Preference Group	Rank Order						
	1	2	3	4	5	6	7
Mentally Retarded	73	33	48	22	22	27	23
Blind	38	28	61	33	36	31	21
Emotionally Disturbed	32	44	33	41	37	36	24
Speech Impairment	22	51	20	52	39	37	26
Deaf	23	45	26	38	48	40	26
Gifted	30	34	28	41	42	25	46
Cerebral Palsy	30	12	32	19	22	51	80

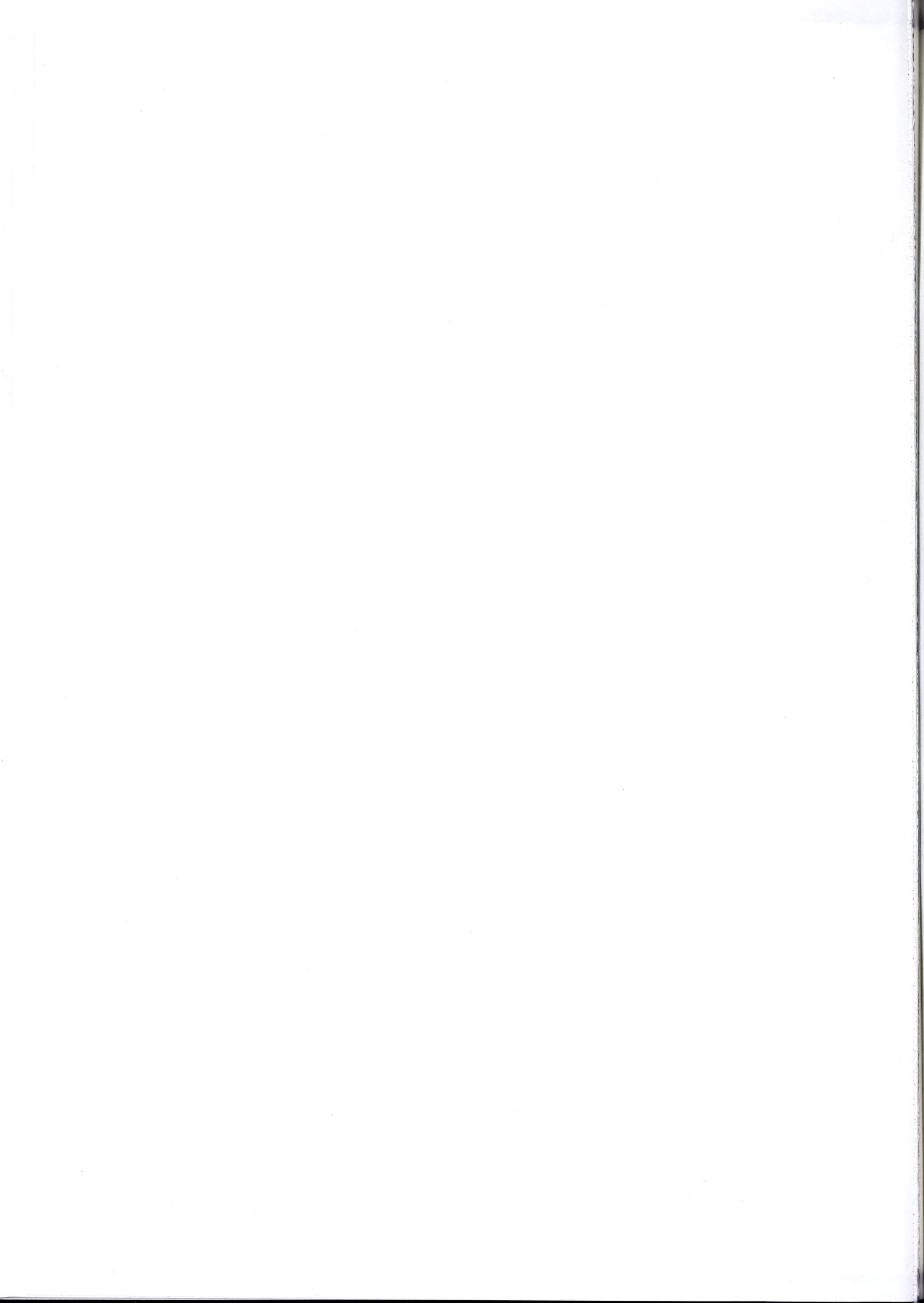


TABLE 19
FREQUENCY DISTRIBUTION OF KNOWLEDGE SCORES ACCORDING TO CONTACT AND
NO CONTACT WITH THE BLIND FOR BEGINNING STUDENTS

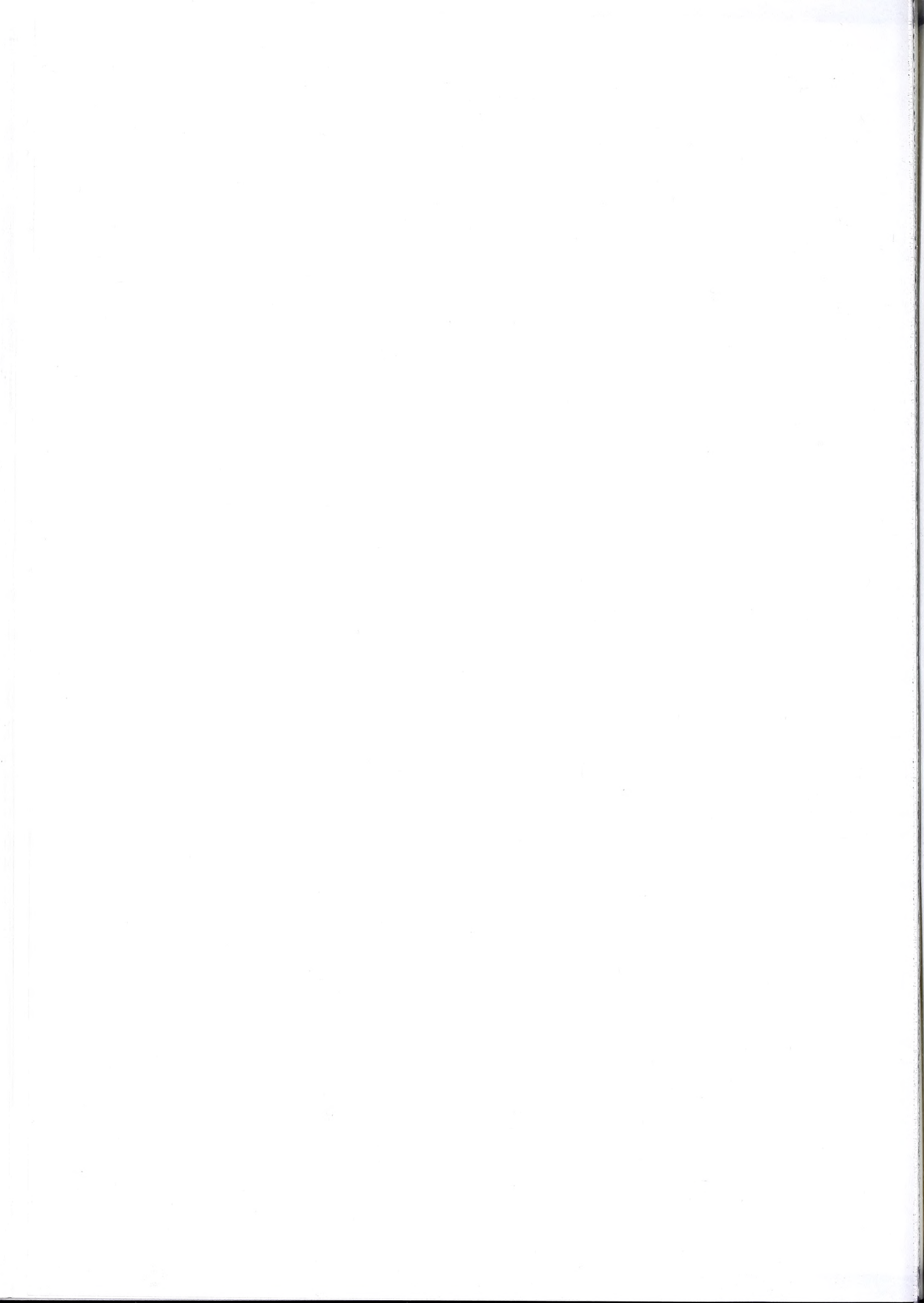
Group	Scores								Total	Mean
	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89		
(a) Total N %	2 0.79	6 2.38	34 13.49	83 32.94	84 33.33	36 14.29	6 2.38	1 0.40	252	48.99
(b) Contact N %	0 0.00	2 1.90	10 9.52	32 30.48	36 34.29	18 17.14	6 5.71	1 0.96	105	51.48
(c) No Contact N %	2 1.36	4 2.72	24 16.33	51 34.69	48 32.65	18 12.25	0 0.00	0 0.00	147	47.17

t a-b = 1.95

a-c = 1.70

b-c = 3.16*

* = .05 level of significance or above



This proposition examines the impact of close relationships with the blind through meaningful social life experiences on attitude formation and their relation to want satisfaction or frustration. The intensity of social interaction appears to follow in a direct line from family (high) to passing acquaintance (low) (Table 20). Needless to say, though the family appears to have the most intense relationships, a very close friend could stimulate a similarly intensive relationship. This is readily observable in that the ranking indicates close friend as second only to the family. Inasmuch as the differences between these categories are relatively slight, we have formulated a group which includes each differentiated personal life experience into one concept--personal life experience (Table 21). An evaluation of the factors on the semantic differential indicates a negative direction on all six factors, with factors 2 and 5 approaching significance with a t of 1.89 and 1.8 respectively.

TABLE 20

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING TO
PERSONAL LIFE EXPERIENCE FOR BEGINNING STUDENTS

Factor	Personal Experience N = 86	No Personal Experience N = 166	t^*
1 Evaluation	2.57	2.44	1.78
2 Activity	3.08	2.88	1.89
3 Potency	3.18	3.04	1.53
4 Social Stimulus	2.96	2.86	1.44
5 Health	3.22	2.95	1.80
6 Psychological Attributes	3.13	3.10	0.33

* = .05 level of significance or above.

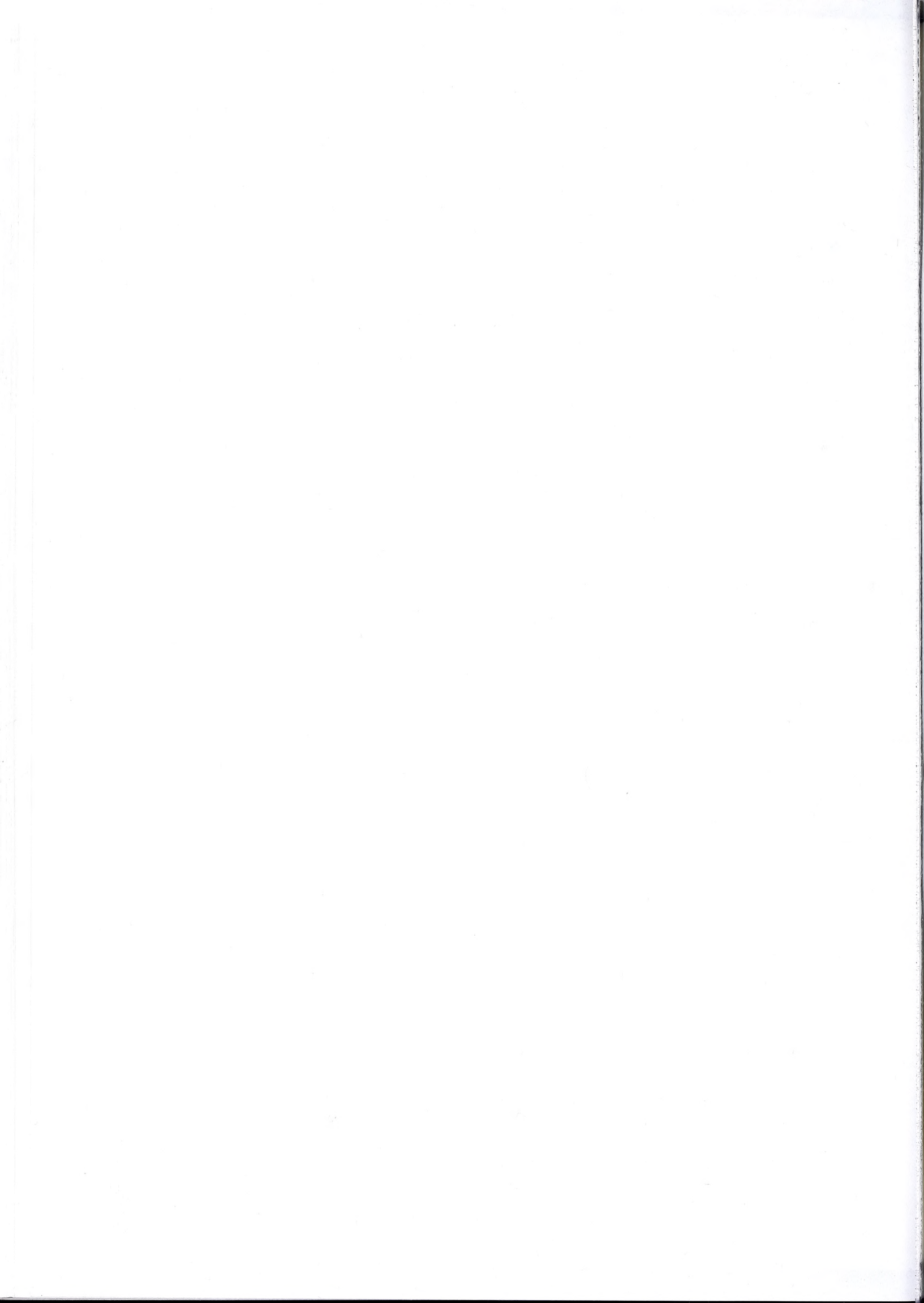


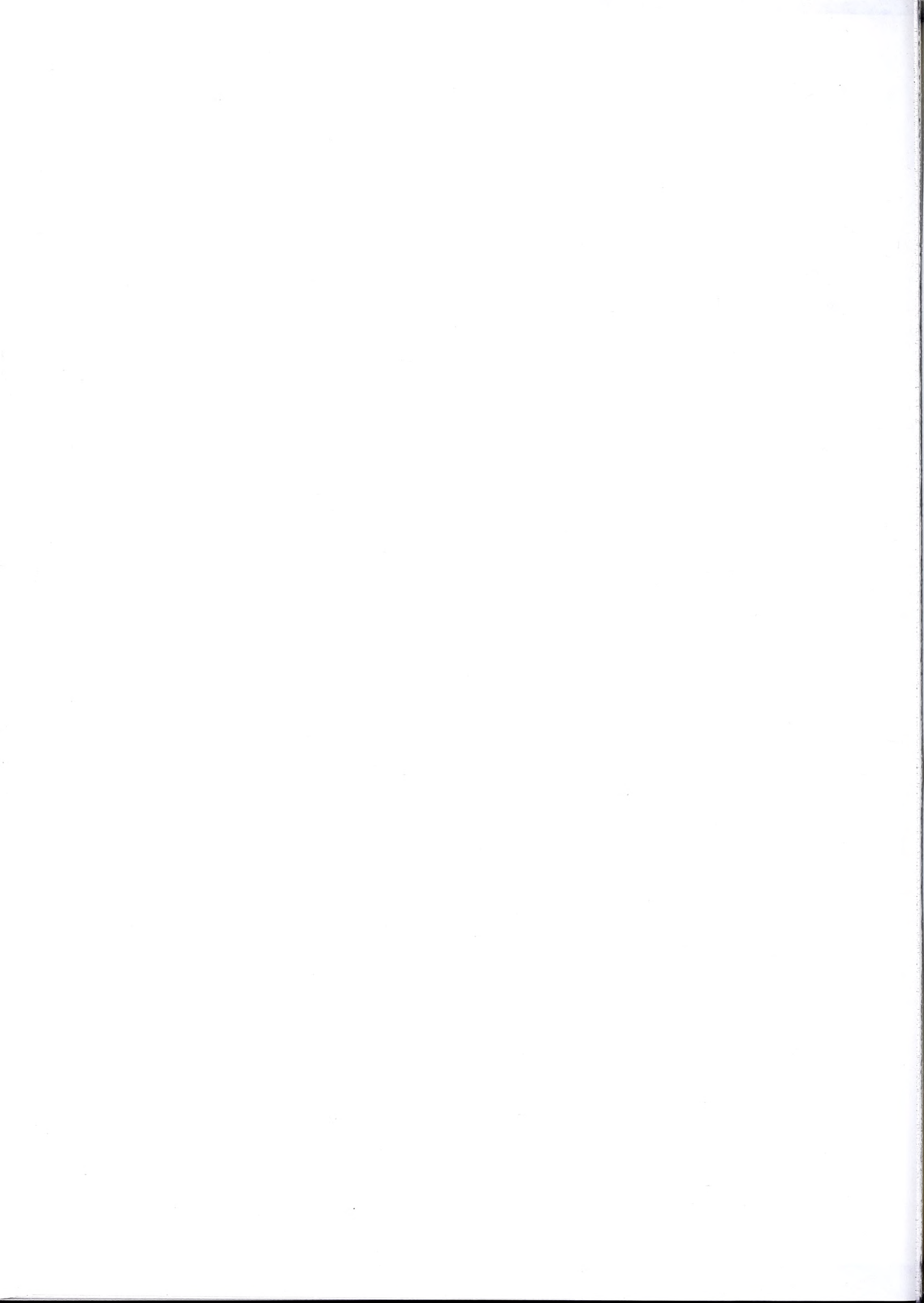
TABLE 21

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING TO
SPECIFIC LIFE EXPERIENCE FOR BEGINNING STUDENTS

Scale Number	Immediate Family N = 7	Close Friend N = 23	Close Relative N = 7	Neighbor N = 8	Passing Acquaintance N = 52
1	2.14	2.13	2.57	2.75	2.38
2	2.29	2.00	2.29	2.63	2.35
3	2.43	2.39	2.29	2.75	2.54
4	2.43	2.83	2.71	3.00	2.69
5	2.71	3.26	3.43	3.00	3.06
6	2.43	3.22	3.14	3.25	3.37
7	2.14	2.74	3.00	3.31	2.79
8	2.57	3.22	3.29	3.13	2.94
9	2.43	2.96	3.14	3.13	3.38
10	2.43	2.91	2.86	2.88	3.04
11	3.00	3.26	3.57	3.00	3.33
12	2.57	3.52	3.14	3.00	3.58
13	2.57	2.91	2.57	2.75	2.85
14	3.14	3.22	3.14	3.38	3.44
15	1.83	2.96	3.00	3.25	3.50
16	2.43	2.87	2.71	3.00	3.29
17	2.86	3.30	2.86	3.25	3.69
18	2.43	2.87	2.86	2.88	2.92
19	2.43	2.78	3.14	2.88	2.88
20	2.00	2.17	2.57	3.00	2.79

The students in this population who have blind family members regard the sightless in the most positive light. The intimate contact and intense social interaction with blind family members provide an emotive situation. The other specific life experiences indicate a very modified and somewhat less intensive type of relationship to blind members.

On the pupil preference rank order scale (Table 22), the personal life experience group weighted the blind toward the positive, with 54 percent in the upper three categories as compared to 34 percent in



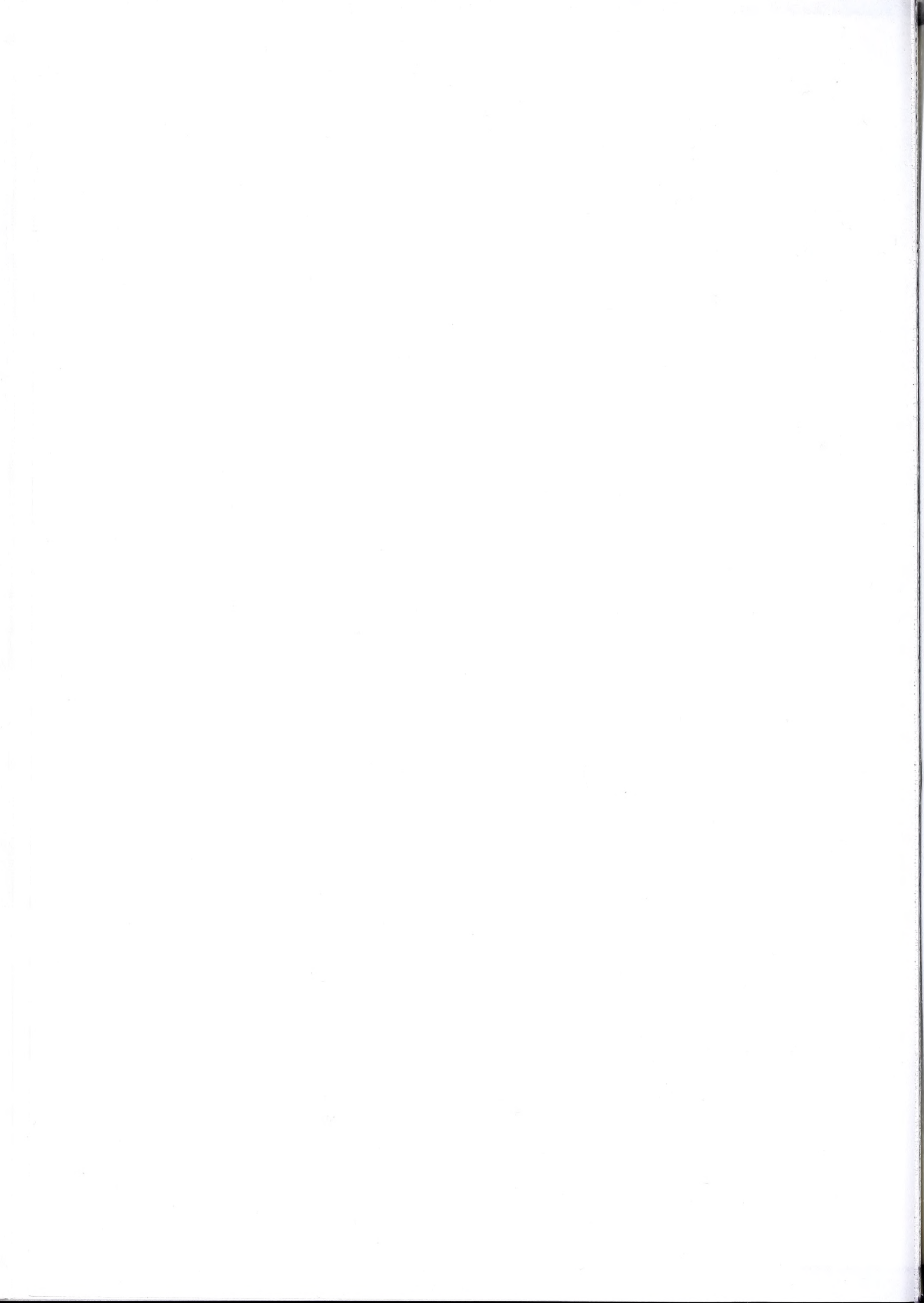
the lower three categories. In computations to be presented under subsequent hypotheses, the personal life experience group within the two high exposure schools showed an extremely positive inclination to work with the blind at the .02 and .01 levels of significance. There undoubtedly is some selective bias in a student's choice of a school which would account for some of this phenomena.

TABLE 22

FREQUENCY DISTRIBUTION OF PUPIL PREFERENCE RANK ORDER OF
THE BLIND ACCORDING TO PERSONAL AND NO PERSONAL
LIFE EXPERIENCE WITH THE BLIND FOR BEGINNING
STUDENTS

Experience	Rank Order						
	1	2	3	4	5	6	7
Personal Experience	16	11	17	11	13	8	8
No Personal Experience	22	17	44	22	23	23	13

When considering the knowledge inventory there is a definite placing of knowledge scores at the extremes, the personal life experience placing over 38 percent at the upper and lower levels with the no personal life experience 31 percent (Table 23). In scores about sixty points those with personal life experience had some 26 percent; less than half of that percent on the no personal experience group placed above sixty points. It is illustrated that knowledge scores at the 50 percent or above level adhere closely to the order of intensity of contact: family, 71 percent; close relative, 71 percent; close friend, 65 percent; passing



acquaintance, 61 percent; work experience, 58 percent; neighbor, 50 percent; no contact, 44 percent.

TABLE 23

FREQUENCY DISTRIBUTION OF KNOWLEDGE SCORES ACCORDING
TO PERSONAL AND NO PERSONAL LIFE EXPERIENCE WITH
THE BLIND FOR BEGINNING STUDENTS

Group	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	Total
Personal									
N	0	2	9	23	30	16	6	0	86
%	0.00	2.33	10.47	26.74	34.88	18.60	6.98	0.00	
No Personal									
N	2	4	25	60	54	20	0	1	166
%	1.20	2.41	15.06	36.14	32.53	12.05	0.00	0.60	

It is recognized that the use of percentages to compare differences, especially for these smaller categories has a tendency to magnify the variations between the groups; nevertheless, it allows for a graphic presentation of the lines of intensity of social interaction as they affect outcome variables.

The results so far revealed with the semantic differential, but more clearly and graphically portrayed by the pupil preference rank order and the knowledge inventory, sustain the hypothesis.

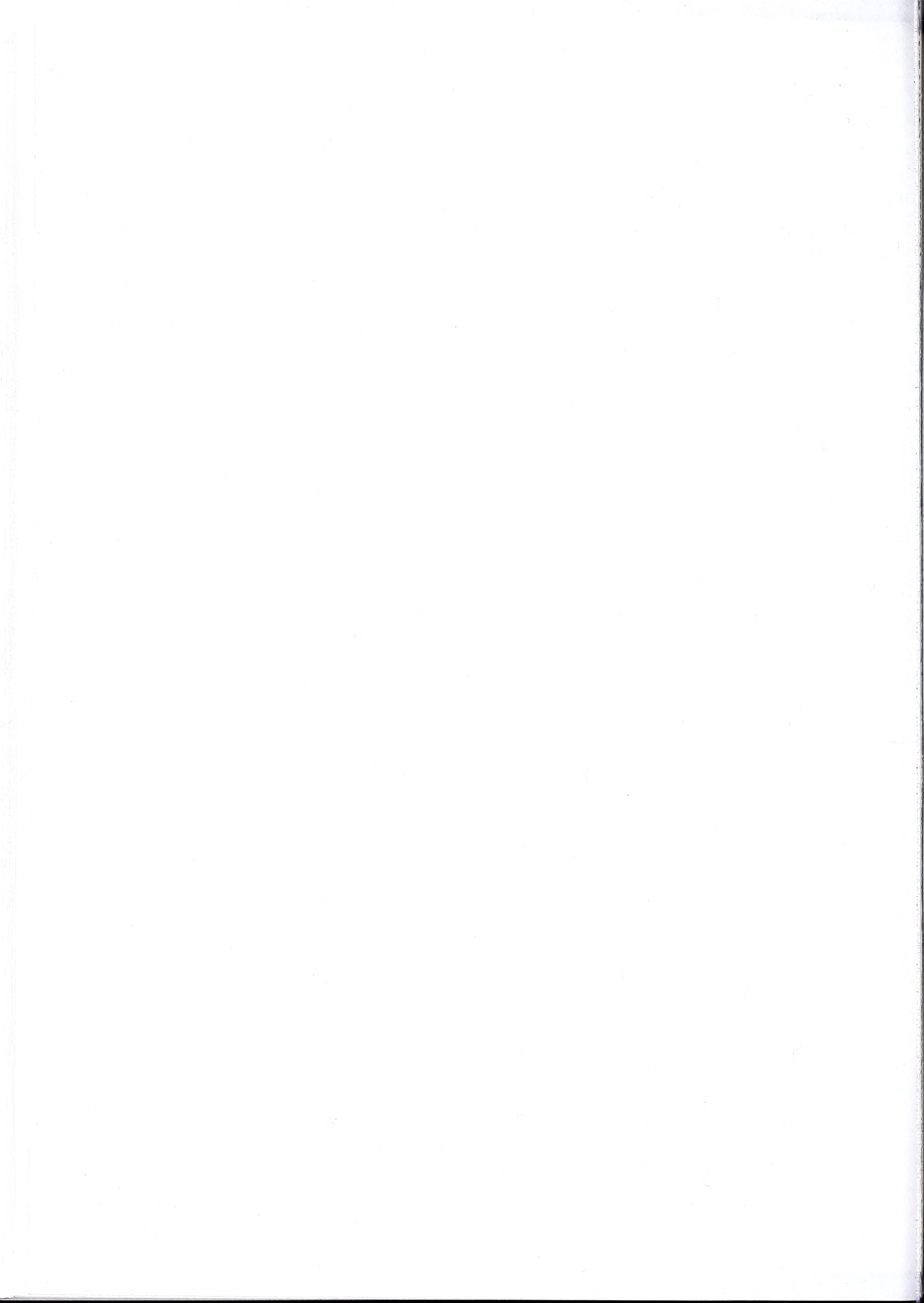
Hypothesis No. 3

Minimal changes in knowledge and attitudes will be evidenced by the terminating group with little or no exposure in the curriculum, whereas more change will be evidenced by those with exposure through class or field teaching.



One of the aspects of this research was the placing of the schools in a high and low exposure continuum. This was achieved by the acquisition of schools through a purposive sample which evaluated each institution along a gradient based on curriculum exposure. The exposure was predicated on statements derived from the specific administration and faculty of the schools researched in this study. Of necessity the information derived was evaluated on quantitative rather than qualitative factors. All departments of special education in this study indicated a progressive insertion of material on blindness. Within the high exposure schools there was quantitatively more information, specialized personnel, and greater choice of practicum experience. Schools One and Two had qualified and known personnel responsible for sequences of courses as well as personal involvement with students through classroom teaching and practicum supervision. The personnel of these schools aforementioned are nationally and internationally known, contributing to the literature, research, and institutes on the teaching and rehabilitation of the sightless.

The interest of this hypothesis is based on the desire to more fully evaluate the theoretical relationships between cognition and attitudes, and whether the efforts towards more curriculum enrichment would have implications for practice. It has been suggested that differentia within the student body (note Hypotheses 4, 5, and 6) could be more significant than between student bodies in different schools, especially since the ranking of schools along the line of a curriculum exposure from the types of survey data acquired, is necessarily limited. Yet it is felt that the information is worth assessing from this angle, for it



tends to control for qualitative differences between schools. Thus, inquiry is made as to whether the general student body exhibits more change in knowledge and attitudes toward blindness as a result of degrees and nature of exposure to information in this area.

Table 24 indicates the data as substantially sustaining the hypothesis, though the direction of attitude change is negative. All semantic factors are in the negative direction with significance at the .02 level for factors 6 in school No. 1 and still higher t-scores at the level of .001 on factors 1, 2, and 4, with factor 3 at a .01 level. On school No. 2, the second of the high exposure grouping, five of the six factors have a level of significance at the .001. These two schools vividly describe with extreme t-scores the impact of educational exposure on attitude change. To more fully substantiate the hypothesis the low exposure must exhibit minimal change. This is well demonstrated by schools Nos. 4 and 5 of the low exposure group. All six factors of both of these low exposure schools show very minimal movement. The direction of school No. 4 is negative, whereas on school No. 5 it is positive, but non-significant. The data on school No. 3, though in apparent contradiction of the hypothesis, involves a very small number of students and is best viewed as a statistical artifact.

It is noteworthy, however, that for the entire student body studied (Table 25), all the beginning students indicated a high positive evaluation of the blind. The school experience minimized this positive view moving in a negative direction. Though this direction was negative, nevertheless, the graduating group still evaluated the blind in a very positive way. When bringing the total scales together

for both beginning and graduating students, the means exhibit a negative direction from 2.87 to 3.05. Considering 4.00 as the neutral rating, the graduates still have a significantly positive view towards the blind.

TABLE 24

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING
TO SCHOOL FOR BEGINNING AND GRADUATING STUDENTS

School	High Exposure		Low Exposure		
	1	2	3	4	5
Evaluation					
B	2.33	2.38	1.73	2.67	2.47
G	2.83	3.09	2.47	2.57	2.37
t	-4.65*	-6.78*	-4.78*	1.14	0.69
Activity					
B	2.59	3.08	2.17	2.99	2.97
G	3.22	3.60	3.07	3.12	2.90
t	-3.78*	-3.30*	-4.17*	-1.03	0.31
Potency					
B	2.83	3.16	2.11	3.17	3.10
G	3.23	3.80	3.38	3.23	2.88
t	-2.67*	-4.29*	-4.21*	-0.57	1.13
Social Stimulus					
B	2.57	2.90	1.89	3.07	2.84
G	3.11	3.52	3.04	3.09	2.77
t	-5.08*	-0.70	-5.89*	-0.21	0.52
Health					
B	2.74	3.11	2.33	3.10	3.12
G	3.12	3.95	3.22	3.11	2.75
t	-1.49	-3.57*	-2.09*	-0.05	1.16
Psychological Attributes					
B	2.88	3.11	2.11	3.23	3.15
G	3.23	3.63	3.27	3.13	2.97
t	-2.34*	-4.04*	-3.36*	-0.86	0.93

* = .05 level of significance or above.

TABLE 25

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND
FOR BEGINNING AND GRADUATING STUDENTS

Scale	Beginning N = 252	Variance	Graduating N = 182	Variance	t*
1	2.26	1.21	2.47	1.51	-1.84
2	2.22	1.26	2.34	1.58	-1.01
3	2.37	1.45	2.60	1.58	-1.96
4	2.76	1.27	2.93	1.31	-1.52
5	2.99	1.33	3.20	1.26	-1.95
6	3.04	1.34	3.18	1.25	-1.28
7	2.69	1.23	2.90	1.11	-2.01
8	2.85	1.28	3.14	1.06	-2.76
9	3.05	1.30	3.21	1.16	-1.55
10	2.88	1.25	3.04	1.07	-1.60
11	3.25	1.57	3.35	1.31	-0.88
12	3.31	1.64	3.44	1.47	-1.12
13	2.74	1.31	3.02	1.42	-2.45
14	3.22	1.32	3.36	1.06	-1.33
15	3.29	1.23	3.32	1.25	-0.27
16	2.95	1.30	3.26	1.20	-2.82
17	3.37	1.98	3.54	1.75	-1.31
18	2.80	1.29	2.99	1.14	-1.84
19	2.82	1.31	2.96	1.12	-1.22
20	2.46	1.57	2.69	1.62	-1.92

*.05 level of significance or above (Scales 3, 7, 8, 13, and 16)

As a further example of the ceiling effect, Table 26 exhibits the inhibition of preferential movement by the ceiling effect established by the beginning students. The pupil preference rank order indicates minimal changes on the high exposure schools as a group, with a change in the low exposure schools as a group at the .05 level of significance, which appears contrary to the hypothesis. In both school groups, however, the rank ordering of pupil preference groups is only slightly changed.

The evaluation of the knowledge inventory (Table 27) shows that school No. 2 has a significantly higher level of knowledge. This

corresponds with its preference rankings ($t = 10.08$) for which the computation is not shown. The difference between the two graduate classes of the high exposure indicates school No. 2 with a .01 level of significance over school No. 1.

TABLE 26

PUPIL PREFERENCE MEAN RANK ORDER OF SELECTED GROUPS ACCORDING TO HIGH AND LOW EXPOSURE FOR BEGINNING AND GRADUATING STUDENTS

Pupil Group	Beginning	Graduating	t*
High Exposure			
Mentally Retarded	3.16	3.18	-0.09
Blind	3.88	4.01	-0.47
Emotionally Disturbed	3.93	3.73	0.69
Speech Impairment	4.05	4.14	-0.32
Deaf	4.07	4.04	-0.07
Gifted	4.17	3.84	1.12
Cerebral Palsy	4.74	4.94	-0.66
Low Exposure			
Mentally Retarded	3.32	2.30	3.80*
Blind	3.56	4.12	-2.24*
Emotionally Disturbed	3.79	4.12	-1.40
Speech Impairment	3.98	3.88	0.37
Deaf	4.10	4.13	-0.09
Gifted	4.18	4.27	-0.35
Cerebral Palsy	5.02	5.17	-0.58

* = .05 level of significance or above

The maximum level of knowledge achieved in the cognition list by high exposure is in distinct support of the hypothesis. The low exposure, except for school No. 3, which has been mentioned previously as having a statistical artifact in this type of analysis, are non-significant in change.

TABLE 27

MEAN KNOWLEDGE SCORES ACCORDING TO SCHOOL
FOR BEGINNING AND GRADUATING STUDENTS

Grouping	High Exposure		Low Exposure		
	1	2	3	4	5
Beginning					
Mean	45.97	53.01	53.33	45.52	52.61
Variance	86.45	121.40	1.33	128.77	45.12
Graduating					
Mean	52.14	60.80	46.22	45.61	49.05
Variance	109.88	131.96	97.03	128.49	57.63
Net Change	+6.17	+7.79	7.11	+0.09	-3.56
df	95	101	28	149	51
t	3.04*	2.74*	-3.54**	0.05	-1.72

* = .01 level of significance.

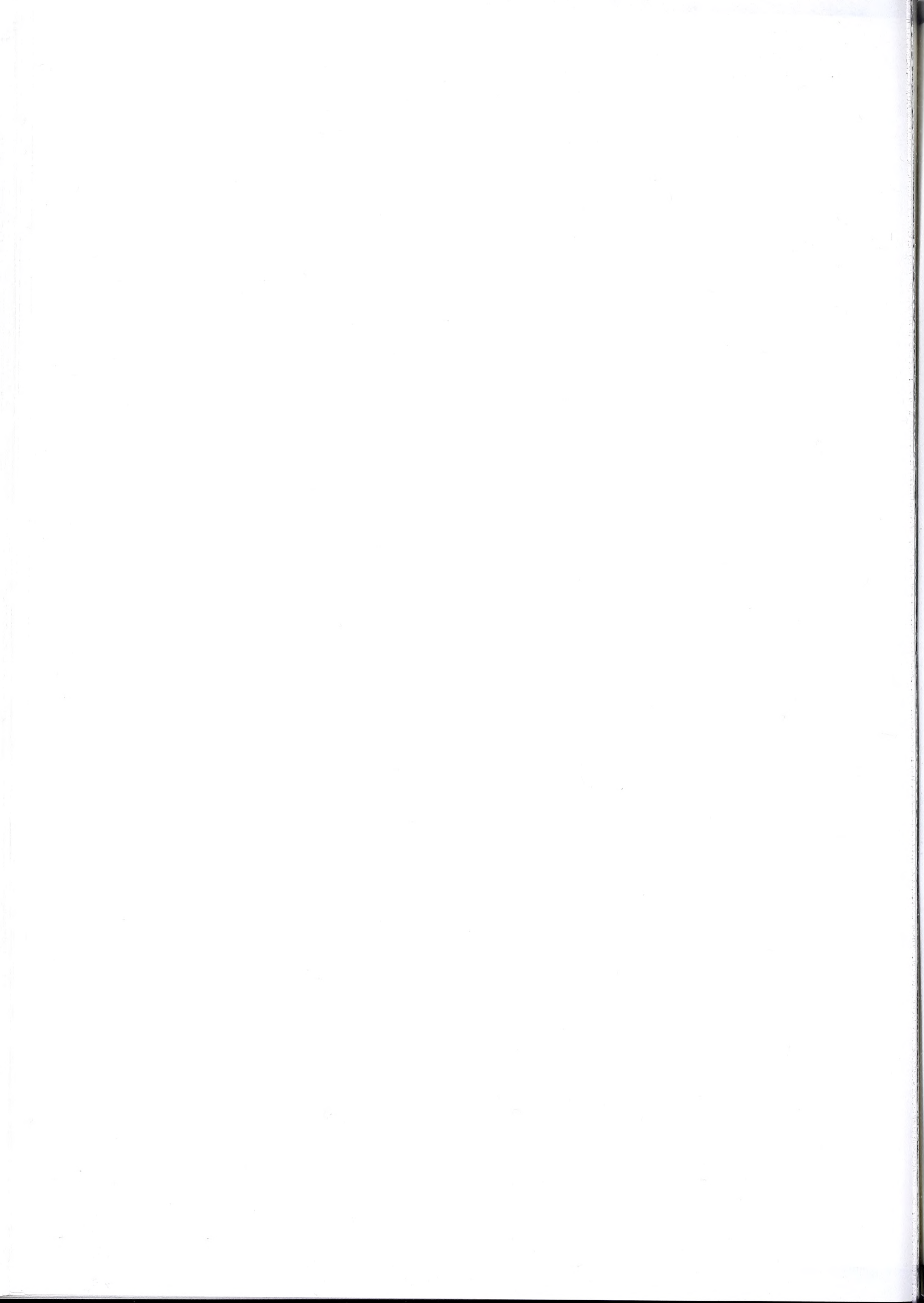
** = .001 level of significance.

The hypothesis is not fully supported by the pupil preference rank order. However, both the semantic differential and the knowledge inventory substantially support the hypothesis

Hypothesis No. 4

Students who have direct contact with the blind persons as part of their education/1 experience will demonstrate greater attitude change, either positive or negative, in knowledge increments than those with exposure through formal coursework.

In Chapter III on the theoretical frames specific consideration was given towards the impact of beliefs or emotive situations on formation of social attitudes. A particular emphasis was placed on the role of feeling as well as the reference or source of information. There is



a unique relationship of the significant others in the process of both knowledge acquisition and emotional change. The practicum experience brings the student into contact in a more meaningful way with both supervisor and with the client and his family providing both intellectual and emotional conditions in the learning situations. It may be noted that the practicum supervisor is placed in an intensive as well as prolonged situation with the student, thus providing the supervisor with the unique impact on not just knowledge acquisition but attitudinal change.

This study did not request specific information of the students as to practicum supervisors; nevertheless, this investigator has been involved for the last twenty-five years in a personal, academic, and administrative way with some of these schools allowing for an evaluation of both curriculum and supervisor impact on students. It is obvious that this information, while not quantifiable, nevertheless adds to the comprehension of the analysis.

There were thirty-seven students placed in the practicum. Most of these had previous work experience. Work experience, as we have previously discussed and elaborated in hypothesis No. 2, had one of the lowest knowledge scores in relationship to the other specific life experiences.

Table 28 indicates that the practicum students tend to be more negative than the no practicum, reaching a statistically significant level on only factor 3. Though the low exposure shows the same negative trend, there is no significance. As measured by the semantic differential, the nature of school experience is minimally discriminating.

TABLE 28

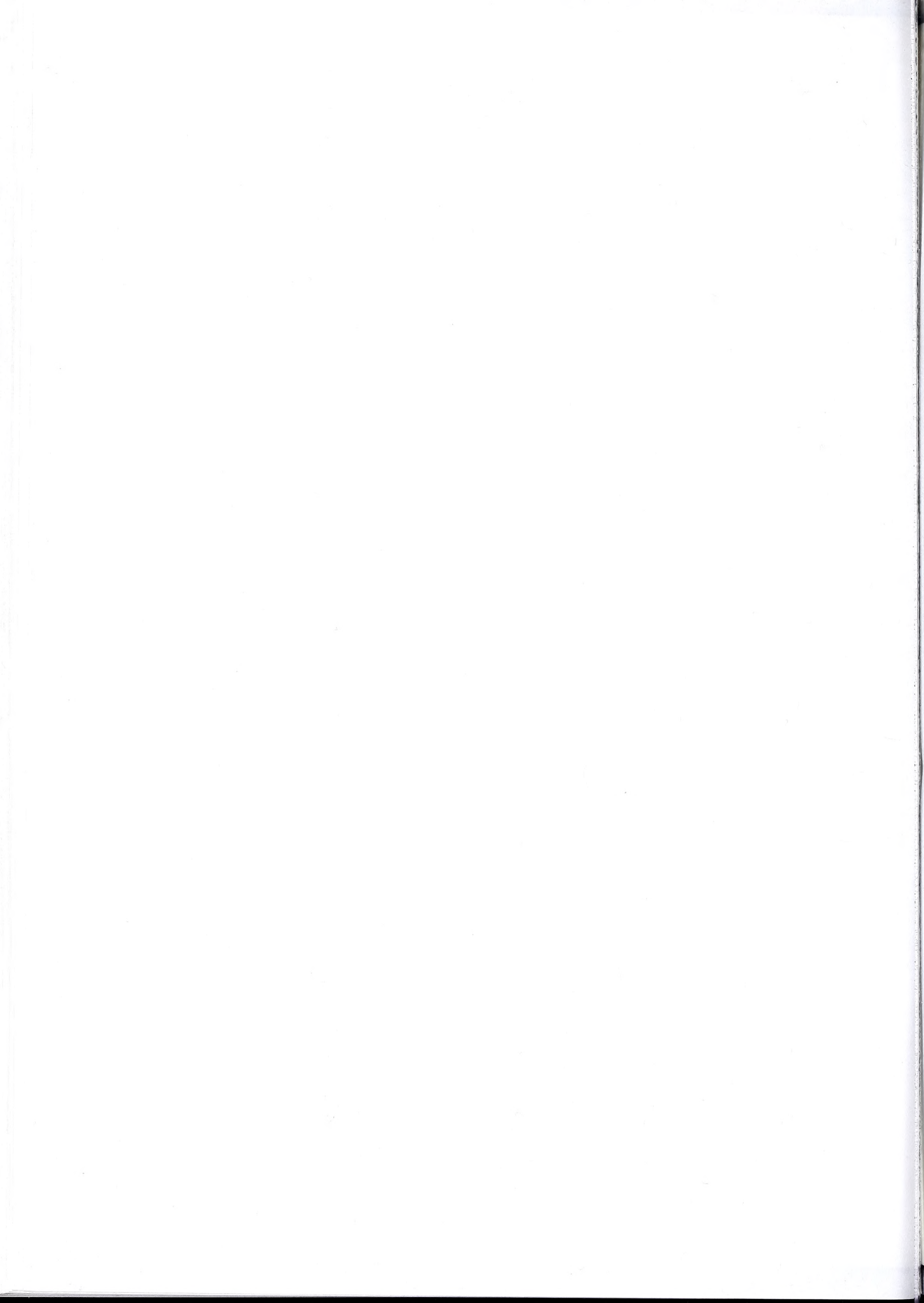
SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING
TO HIGH AND LOW EXPOSURE FOR PRACTICUM AND
NO PRACTICUM GRADUATING STUDENTS

Exposure and Factor	No Practicum	Practicum	t*
High Exposure			
1 Evaluation	2.60	2.90	-1.90
2 Activity	2.87	2.90	-0.10
3 Potency	2.67	3.26	-2.70*
4 Social Stimulus	3.20	3.16	0.27
5 Health	3.00	3.58	-1.47
6 Psychological Attributes	3.53	3.68	-0.80
Low Exposure			
1 Evaluation	2.27	2.33	-0.25
2 Activity	2.08	2.33	-0.64
3 Potency	2.27	2.67	-1.42
4 Social Stimulus	2.89	3.17	-1.71
5 Health	3.10	3.50	-1.08
6 Psychological Attributes	3.06	3.00	-0.24

* = .05 level of significance or above

As hypothesized, the pupil preference rank order shows a decidedly positive trend (Table 29). The scores cluster definitely in the first category for the practicum students. Of the twenty-eight students in the high exposure practicum group (Table 30), twenty-six placed blind first, with one as second and one as fifth, whereas in the low exposure practicum, one placed blind as third, four as fourth, and one as sixth.

There is a decided impact of the practicum experience on the students' preference for working with the blind. In Table 31 four people stated their change in preference of the blind. Though the



change is definite, the number is too small and can only be used in an illustrative manner rather than to sustain the hypothesis.

TABLE 29

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND ACCORDING
TO HIGH AND LOW EXPOSURE FOR PRACTICUM AND NO
PRACTICUM GRADUATING STUDENTS

	No Practicum	Practicum	t*
High Exposure	3.72	1.18	8.51*
Low Exposure	4.68	4.17	1.21

* = .05 level of significance or above.

TABLE 30

FREQUENCY DISTRIBUTION OF PUPIL PREFERENCE RANK ORDER OF THE
BLIND ACCORDING TO HIGH AND LOW EXPOSURE FOR
PRACTICUM STUDENTS

School	Blind Rank Order							Total	Mean
	1	2	3	4	5	6	7		
High Exposure	26	1	0	0	1	0	0	28	1.18
Low Exposure	0	0	1	4	0	1	0	6	4.16
Total	26	1	1	4	1	1	0	34	1.71

The knowledge inventory (Table 32) vividly demonstrates the difference between the practicum and no practicum students. Inasmuch as both groups are introduced to the same classroom experience, the assumption is logical that the impact is largely stimulated by the practicum

supervisor and practicum situation. Their direct relationship with the supervisor, other students in case conferences and practicum seminars, effects a large degree of change. The knowledge inventory shows the practicum students with a change in knowledge significant at the .01 level as compared to the no practicum group. It becomes evident that the high exposure schools have a level of experience with curriculum that is somewhat superior, emphasizing the practicum, personnel, and the opportunity for a specific emotive experience with the blind.

TABLE 31

CHANGES IN PUPIL PREFERENCE RANKING OF THE
BLIND FOR PRACTICUM STUDENTS

Time Period	Client Preference Rank Order						
	1	2	3	4	5	6	7
Beginning	0	3	0	0	1	0	0
Now	3	1	0	0	0	0	0

TABLE 32

MEAN KNOWLEDGE SCORES ACCORDING TO HIGH AND LOW EXPOSURE
FOR PRACTICUM AND NO PRACTICUM GRADUATING STUDENTS

School	Knowledge Scores						df	t*
	No Practicum			Practicum				
	N	Mean	Variance	N	Mean	Variance		
High Exp.	47	51.64	121.06	31	58.48	114.72	76	2.73*
Low Exp.	98	46.05	103.18	6	53.00	132.40	102	1.44

* = .05 level of significance or above.

The data relative to this hypothesis supports the effect of direct contact through practicum experience on pupil preferences and knowledge scores.

Hypothesis No. 5

Terminating students with previous meaningful social life experiences with the blind will not demonstrate significant attitude change through educational exposure.

This hypothesis is predicated on the assumption that personal life experiences which are meaningful, will tend to restrict the change of attitudes. It is conceived that those beliefs and cognitions which are strongly held and fortified by intimate social interaction will be less susceptible to change. Considering this, we would posit that graduating students in the personal life category would be very similar to and not deviate significantly from the beginning students who have similar backgrounds.

In the semantic differential this hypothesis is most clearly demonstrated with only one factor reaching significance (Table 33). In Factor 3, potency, there appears a significant change from the beginning group. In the earlier part of this study, the scales represented by the potency factor have not been a consistent indicant of feeling directed toward a preferential choice.

The pupil preference list graphically illustrates the lack of change in its preferential ranking (Table 34). Five of the categories are strikingly similar, and further illustrating this phenomena is the t-score of 0.76, indicating the non-significant difference between the

two groups. Similarly, the t-score on the knowledge inventory of 0.79 is also non-significant (Table 35). A closer study of the six scoring categories indicates that the personal life experience group, both beginning and graduating, have very similar scores, which even in detail suggest more strongly the predominance of the personal life experience over the educational.

TABLE 33

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND ACCORDING
TO PERSONAL LIFE EXPERIENCE FOR BEGINNING AND
GRADUATING STUDENTS

Factor	Beginning	Graduating	t*
1 Evaluation	2.33	2.48	-1.82
2 Activity	2.30	2.30	0.00
3 Potency	2.50	2.80	-2.68*
4 Social Stimulus	2.74	2.87	-1.85
5 Health	3.05	3.25	-1.15
6 Psychological Attributes	3.22	3.17	-0.49

* = .05 level of significance or above.

TABLE 34

FREQUENCY DISTRIBUTION OF PUPIL PREFERENCE RANK ORDER OF THE
BLIND ACCORDING TO PERSONAL LIFE EXPERIENCE FOR
BEGINNING AND GRADUATING STUDENTS

Group	Rank Order							Mean	t*
	1	2	3	4	5	6	7		
Beginning	25	15	16	14	14	9	2	3.13	0.76
Graduating	29	5	16	14	14	5	0	2.93	

* = .05 level of significance or above.

TABLE 35

FREQUENCY DISTRIBUTION OF KNOWLEDGE SCORES ACCORDING
TO PERSONAL LIFE EXPERIENCE FOR BEGINNING AND
GRADUATING STUDENTS

Score	Beginning	Graduating	t*
20 - 29	2	2	0.79
30 - 39	10	9	
40 - 49	24	16	
50 - 59	34	34	
60 - 69	17	21	
70 - 79	10	8	
Mean	52.40	53.70	

* = .05 level of significance or above

Though the semantic differential only partially sustains the hypothesis, the pupil preference rank order and the knowledge inventory strongly support the hypothesis.

Hypothesis No. 6

Terminating students with practicum experience in blindness will share a common level of knowledge and attitudes about blindness, distinct from the general student body.

Predicated on the assumption that the practicum students form a reference group for each other, of which the practicum supervisor is a major figure, it would be expected that the practicum students would have less divergence among themselves in their feelings, action tendencies, and cognitions than those of the general student body.

To illustrate the common level of feelings of the practicum students, a frequency distribution of the semantic mean ratings revealed that 60 percent fell within one semantic space. Demonstrating

their distinct difference from the general student body the semantic differential factors 1, 2, 3, 4 and 6 reach a level of significance at .001 with the practicum students being more negative, with the remaining factor 5 at the .01 level (Table 36). This fully supports the hypothesis.

TABLE 36

SEMANTIC DIFFERENTIAL MEAN RATINGS OF THE BLIND FOR
PRACTICUM AND NO PRACTICUM GRADUATING STUDENTS

Factor	Practicum	No Practicum	t*
1 Evaluation	3.08	2.57	5.70
2 Activity	3.54	3.08	3.93
3 Potency	3.70	3.17	4.85
4 Social Stimulus	3.45	3.01	5.63
5 Health	3.57	3.08	2.47
6 Psychological Attributes	3.57	3.13	4.45

* = .05 level of significance or above (all factors).

The cluster concept is clearly illustrated in Table 30, which was alluded to previously under hypothesis No. 4. The pupil preference indicated in its ranking that twenty-six out of twenty-eight practicum students inserted the blind in the first position category. Table 37 clearly distinguishes the practicum from the no practicum students with the former placing the mean at the upper level of 1.71, with the latter having the lower mean of 4.39. This indicates a significant difference at the .001 level.

The frequency distribution of knowledge scores indicate that 78 percent of the practicum students are placed above the fifty-point

grade level with 48 percent of the no practicum in the same category (Table 38). This not only indicates a common level of knowledge for the practicum, but the divergence of the two groups.

TABLE 37

PUPIL PREFERENCE MEAN RANK ORDER OF THE BLIND FOR
PRACTICUM AND NO PRACTICUM GRADUATING STUDENTS

	Practicum	No Practicum	t*
Mean Rank	1.71	4.39	-9.82*

* = .05 level of significance or above

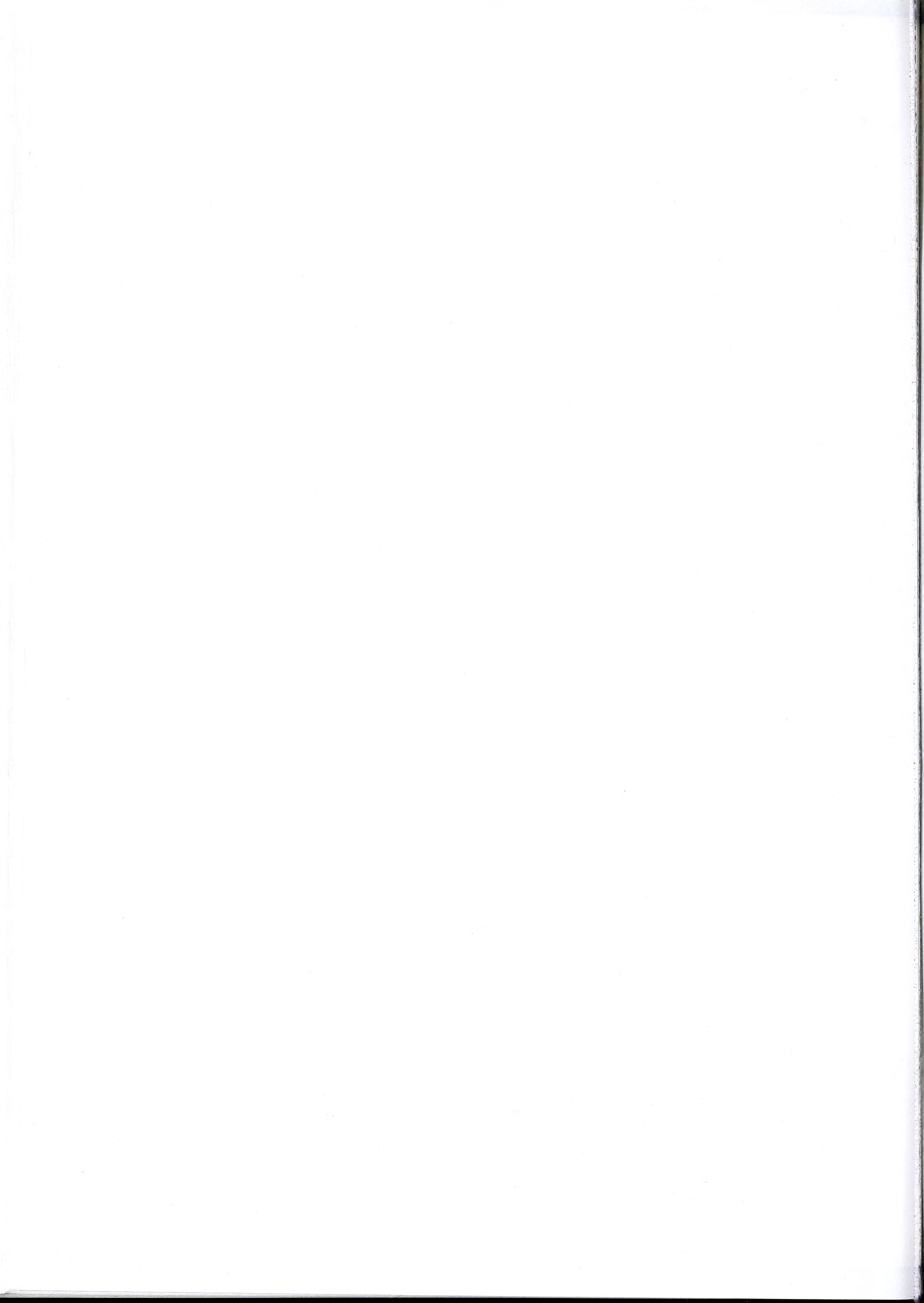
TABLE 38

FREQUENCY DISTRIBUTION OF KNOWLEDGE SCORES FOR
PRACTICUM AND NO PRACTICUM GRADUATING STUDENTS

Score	Practicum		No Practicum		t*
	N	%	N	%	
20 - 29	0	0.00	8	5.52	-4.87*
30 - 39	3	8.11	23	15.86	
40 - 49	5	13.51	44	30.34	
50 - 59	11	29.73	48	33.10	
60 - 69	12	32.43	18	12.42	
70 - 79	6	16.22	4	2.76	
Total	37	100.00	145	100.00	
Mean	57.59		47.86		

* = .05 level of significance or above.

A comparison of levels of knowledge between beginning and graduating students (Table 39), undifferentiated by categories, reveals that



the graduating have a slightly higher distribution in the higher knowledge bracket, which is explained by the extremely high knowledge levels of the practicum students.

The previous analysis strongly support hypothesis No. 6.

TABLE 39

FREQUENCY DISTRIBUTION OF KNOWLEDGE SCORES
FOR BEGINNING AND GRADUATING STUDENTS

Score	Beginning	%	Graduating	%
0 - 9	0	0.00	0	0.00
10 - 19	2	.79	0	0.00
20 - 29	6	2.38	8	4.40
30 - 39	34	13.49	26	14.29
40 - 49	83	32.94	49	26.92
50 - 59	84	33.33	59	32.42
60 - 69	36	14.26	30	16.48
70 - 79	6	2.38	10	5.49
80 - 89	1	.40	0	0.00
90 - 99	0	0.00	0	0.00
Total	252	100.00	182	100.00

The Relationship between Cognitions, Feelings,
and Action Tendencies

Conflicting information has been noted concerning attitude components and their internal consistency. Though this project did not specifically test for this phenomena, there is still much evidence concerning it. With the high exposure, in much of the data the semantic differential, when evaluated for change, tended toward the negative when applied to the graduating group, but reversed towards the positive on the pupil preference rank order with the knowledge inventory increasing

in the same positive direction. There appears to be little internal consistency within the attitudinal components.

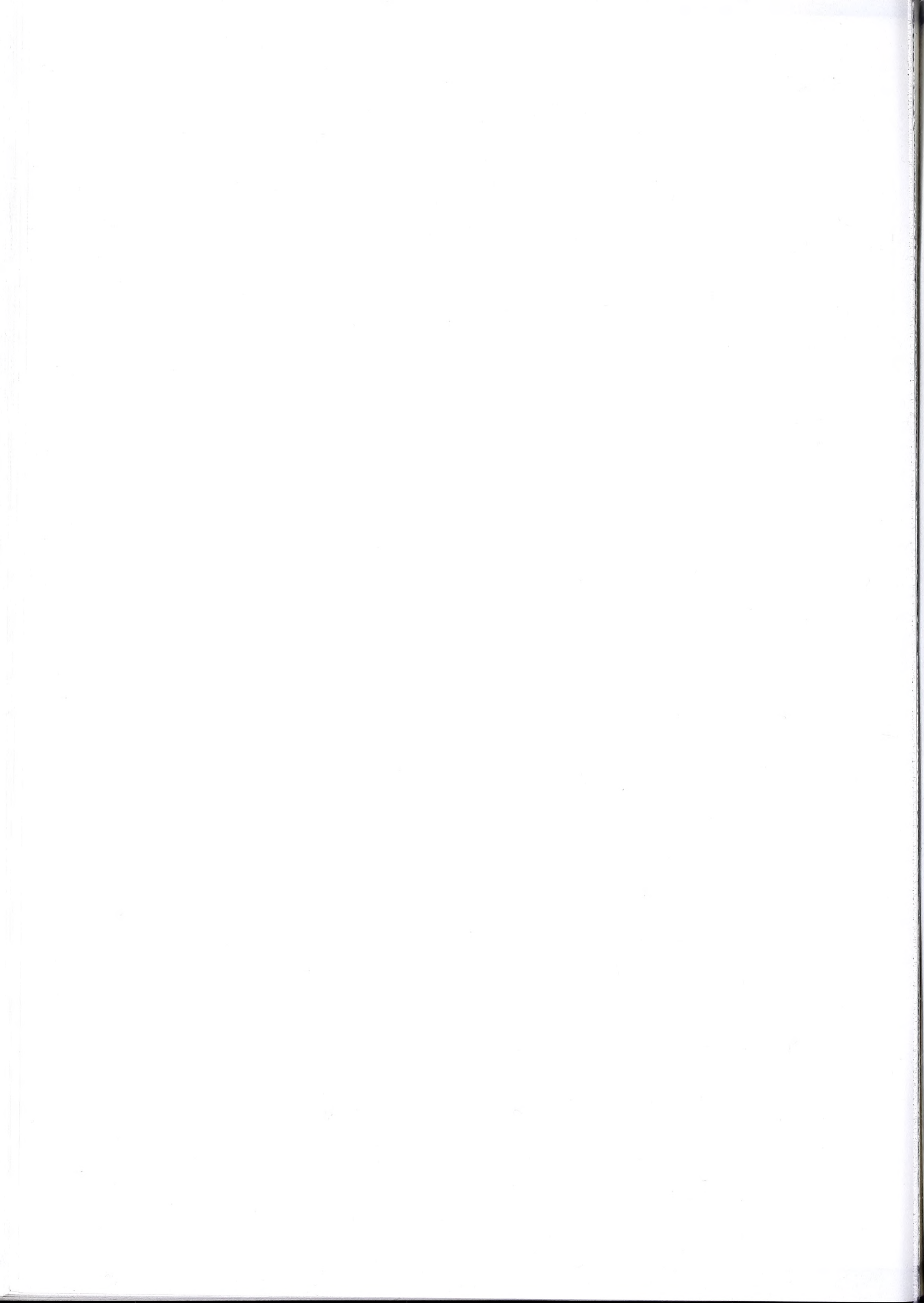
This component inconsistency has some implications for methodology as well as the substance of instruction. For that reason we sought to test this phenomena on a broader scale, and measures of associations were utilized for this purpose. Table 40, undifferentiated by nature of school experience for the graduating students, clearly supports the earlier interpretations.

TABLE 40

CORRELATIONS OF SEMANTIC RATINGS, PUPIL PREFERENCES
AND KNOWLEDGE SCORES, FOR GRADUATING STUDENTS

Variable	Factor						Rank	Knowledge Scores
	1	2	3	4	5	6		
Factor								
1 Evaluation	1.000							
2 Activity	0.718	1.000						
3 Potency	0.719	0.756	1.000					
4 Social								
Stimulus	0.831	0.832	0.892	1.000				
5 Health	0.716	0.714	0.750	0.812	1.000			
6 Psychological								
Attributes	0.755	0.794	0.854	0.901	0.766	1.000		
Pupil Rank	-0.127	-0.159	-0.153	-0.112	-0.109	-0.097	1.000	
Knowledge Score	-0.037	0.021	0.002	-0.037	-0.030	0.050	-0.396	1.000

Between factor correlations on the semantic differential are shown to be highly associated. This is consistent with the view that each scale or cluster of scales (factors) measure related, but somewhat different characteristics of the blind. It is a consistent idea that a



blind person be looked upon as possessing favorable evaluative traits, but unfavorable with respect to one or more other factors. The social stimulus factor is the most highly correlated with the other factors.

It is obvious in this research, as has been reported in other places, that cognition, attitudes, and pupil preferences (response tendencies) are not associated, when undifferentiated by type of experience. These data stand in marked contrast to relationships between these components of attitudes when the learning experience involves emotive situations, as for the practicum students.

In the evaluation of the research material on the semantic differential by parametric statistical techniques, the assumptions of homogeneity and approximations of normal distribution were postulated. Trial tests for homogeneity were supported and the data on standard deviations (Table 41) further tend to validate these assumptions. The greater scatter on client preferences and knowledge scores, already reported upon and further documented here, is consistent with expectations in view of the historical neglect of the problem and the general public concept of blindness.

TABLE 41

MEANS AND STANDARD DEVIATIONS FOR SEMANTIC DIFFERENTIAL
RATINGS AND PUPIL PREFERENCE RANKS OF THE BLIND AND
KNOWLEDGE SCORES FOR GRADUATING STUDENTS

Variable	Number	Mean	Standard Deviations
Factor			
1 Evaluation	182	2.68	1.20
2 Activity	182	3.18	1.05
3 Potency	182	3.28	1.16
4 Social Stimulus	182	3.10	1.20
5 Health	182	3.18	1.12
6 Psychological Attributes	182	3.22	1.12
Preference Rank	182	3.86	1.84
Knowledge Score	182	49.83	11.44

CHAPTER VI

SUMMARY AND CONCLUSIONS

This project researched curricula differentia and experiences with a view toward their impact on the cognitions and beliefs of the special education students toward blindness.

The Variables

The three categories of variables are classified as follows:

(1) socio-economic: age, sex, marital status, children, religious affiliation, socio-economic status; (2) prior life experiences: personal life experiences with blind persons, the type of relationship (immediate family, neighbor, close relative, close friend, and passing acquaintance), place of residence of the blind person, and professional special education experience with blind pupils prior to graduate school admission; and (3) the type and amount of educational exposure: the degree of content within the classroom experience and the primary pupil group taught in the practicum.

These variables were evaluated as to their impact on student cognitions, beliefs, and preferences for the blind as a pupil group.

Population

The population tested consisted of 252 beginning and 182 graduating students in five schools of special education, chosen for

their particular level of curriculum exposure concerning the blind. The schools were evaluated according to the quantity as well as the quality of curricular exposure. A purposive sample was then drawn incorporating also size and academic standing with a view towards approximating national representativeness.

The data indicated a high level of homogeneity. Eighty-seven percent of the students were under age 35, with 74 percent female, the majority being in the middle or upper class category (58 percent). Most were not married (53 percent) and of those married, approximately one-half had no children. By religious affiliation they matched with the national distribution. A significant proportion of the students (40 percent) report personal life experience with blind persons, and approximately one-third have prior work experience with this group.

Procedure

The data within this study was acquired through the use of a self-administered questionnaire. The questionnaire consisted of a personal data sheet, a cognition list of fifty multiple-choice questions, semantic differential rating scales, and pupil preference rank order scales. This questionnaire was completed within one school period of fifty to fifty-five minutes. Parametric statistical tests were utilized in the analysis of the research.

Conclusions

The project tested six hypotheses. Each hypothesis has been treated previously in an extensive manner. The summary which follows

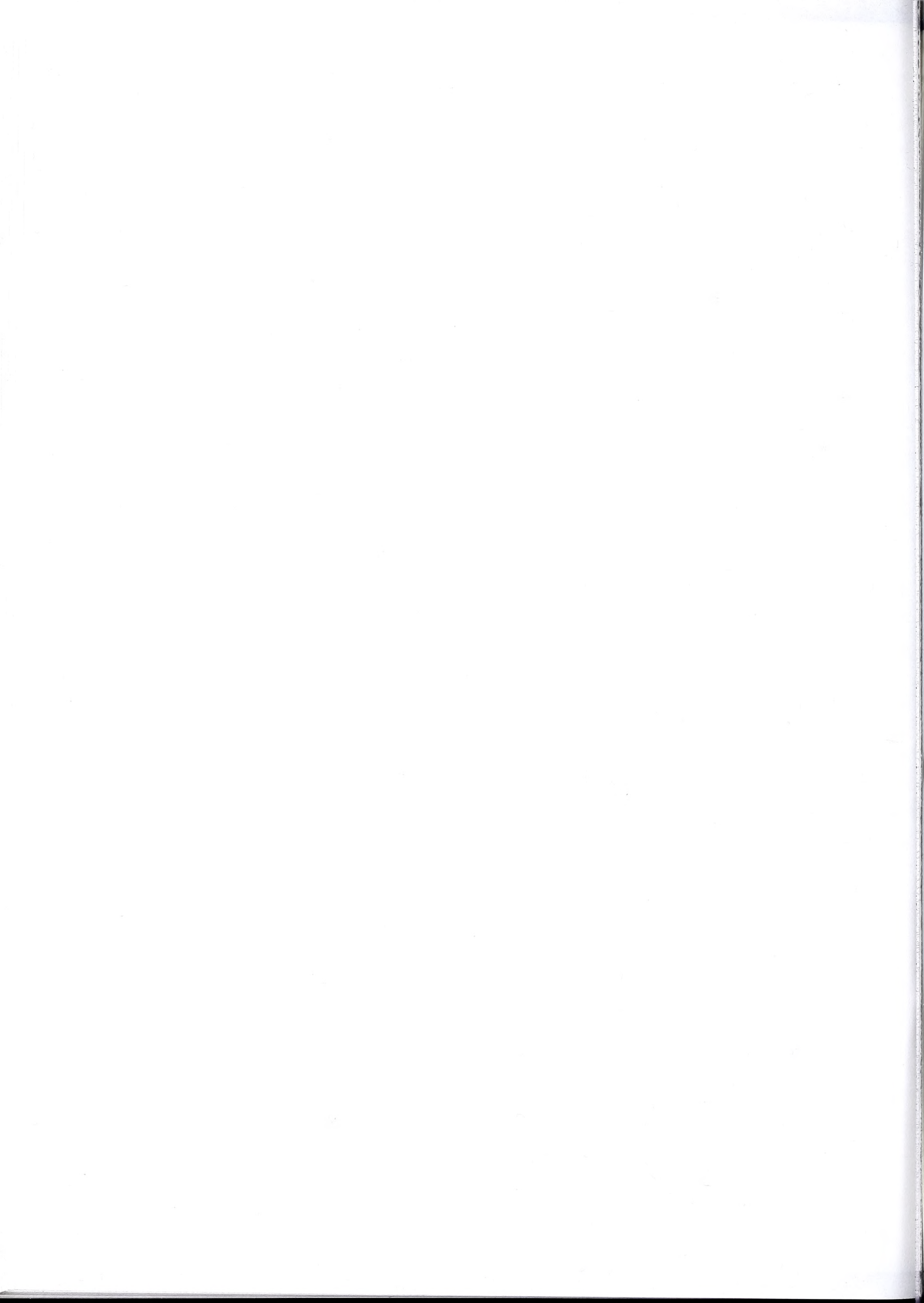
incorporates the major findings which pertain to the general problems of the research. These problems are as listed: (1) the relationship of cognitions and beliefs to socio-economic variables, (2) the evaluation of student cognition and beliefs toward blindness upon admission to graduate schools of special education, and (3) the evaluation of change in student cognition and beliefs as a result of the differences within the graduate educational experience.

Knowledge and Attitudes of Beginning Students

In general, the results support the hypothesis that student knowledge and attitudes toward the blind are influenced by prior personal life experiences. The major findings follow:

1. Students with no direct contact with blind persons exhibit moderately favorable attitudes on the semantic differential, moderately unfavorable action responses, and limited knowledge. Compared to the average person, the blind are rated more favorably on all but four of the twenty bipolar adjectives employed, with one at the .02 level of significance, and all but three of the adjectives that are more positive are significant at the .05 level or above. Equivalent comparisons do not generally apply to the other client groups served by special education teachers. Attitudes reveal the same configuration reported in other studies for the general public, but are less extreme.

2. Students vary considerably in their level of knowledge, but as a group, share many misconceptions about the nature and scope of the problem and the capacities of the blind to profit from special education help. Their general image of the blind seems based on a specific and



unique type of personality, such as a cultural hero.

3. The blind are ranked second among seven pupil groups with respect to their preference as occupational choices. Fifteen percent of the students selected them as their most preferred choice.

4. Students with specific life experiences are not significantly different from each other in either semantic differential, client preference, or on the knowledge score, nor are they significantly different than the general population when placed as a group. On the personal life experience, those with blind immediate family members rated the blind most favorably on the semantic differential with those with close friends, close relatives, neighbor, and passing acquaintance following in order respectively. Those with blind family members and close friends prefer to work with the blind more than those whose contact is on a minimal affective level. Family, close relative, and close friend formed a cluster of knowledge scores above the fifty-point level, which is distinctly higher than those who had less intensive association.

5. Those students who had personal contact with the blind received significantly higher knowledge scores than those who had no contact.

Socio-economic Variables

Though the role of the socio-economic variables has not been specifically entered into the research design, nevertheless, to lend a confidence to the interpretation that the educational experience is the independent variable, these factors were assessed. The major findings follow:

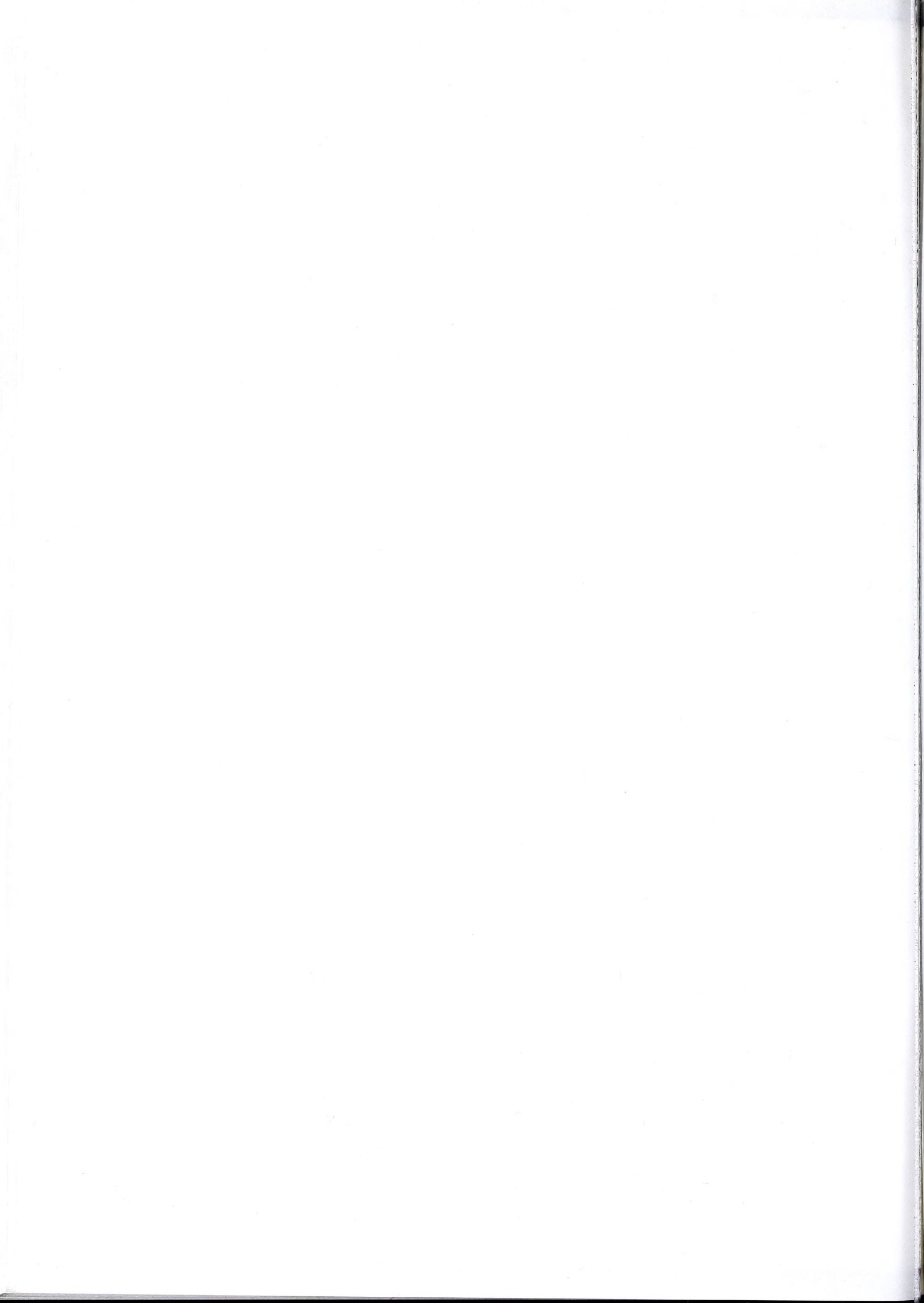
1. Age, sex, and marital status of students are generally not significant, though on factors 1, 2, and 4 of the oldest age group they were significantly negative. Females tended to be more positive than males on the semantic differential as a whole, although the difference was not significant. The presence of children in the marriage was significantly negative on five of the six semantic factors, only the factor on health being non-significant.

2. The no religion, though basically more positive, is similar to Catholic, Jew and Protestant, which are closely associated. The category non-Christian was always more negative on the semantic differential, although there was a reversed position in the pupil preference ranking which was not significant.

3. Education and income, considered as socio-economic status, is non-significant in the areas of the father's relationship on semantic differential and both mother and father on pupil preference. High school education of the mother is significantly more positive on six factors of the semantic differential. On income, the \$7,500 to \$10,000 bracket showed significance on five out of the six factors toward the negative, again except for factor 5. The pupil preference rank showed no significance.

Change in Student Knowledge and Attitudes

The analysis of change in student's knowledge and attitudes was explored as a result of differences in levels of curriculum exposure and nature of the educational experience. Comparisons were made between groups of students and within the graduating group, controlling for



prior personal life experience. The major findings follow:

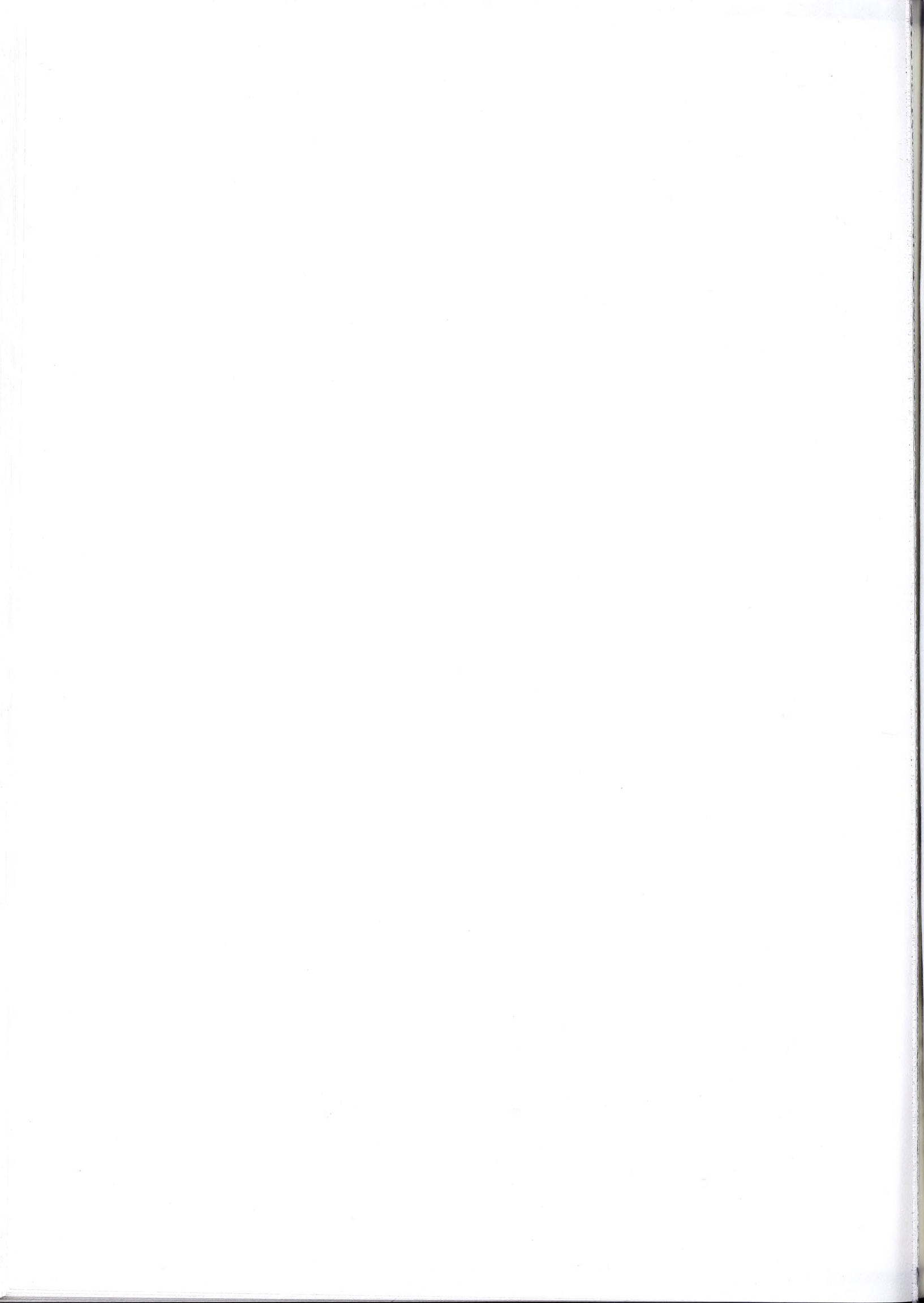
1. Graduating students show a trend toward more negative semantic ratings than beginning students, significant on five of the twenty bipolar adjectives. Comparisons between schools show a significant difference.

2. The general body of graduating students (practicum students excluded) is not superior to beginning students in their knowledge about blindness and share similar misconceptions about the problem. The inclusion of material on blindness is for the most part non-effective in increasing student knowledge or changing attitudes or pupil preferences.

3. Changes in client preference occur as frequently among students in high as they do in low exposure schools, but the rank ordering of pupil groups between beginning and graduating students remain unchanged by the educational experience.

4. Students in practicum placements serving primarily blind pupils are significantly superior in knowledge about blindness to the other students, and demonstrate greater changes in attitude and greater extremes in pupil preference ranking. These changes are in a positive direction, with the result that twenty-six out of twenty-eight ranked the blind as a preferred client group. The quality of the educational placement and practicum supervisor are primary determinants of the direction of attitude change.

5. Practicum students share a common level of knowledge and exhibit a high level of agreement with similarly placed students in the same school in their rankings of the blind as a preferred pupil group.



The research in this project strongly supports the conclusion that cognitions, feelings, and action tendencies are not consistently related except at the extreme ends of the attitude continuum. Knowledge gained from experiences with the blind, particularly on an emotional level, are noted to make a greater impact on attitude formation than the cognitions derived only within the confines of a general curriculum experience. The sources of the cognitions become further reference points for the evaluation of new cognitions and their further integration within attitude structures.

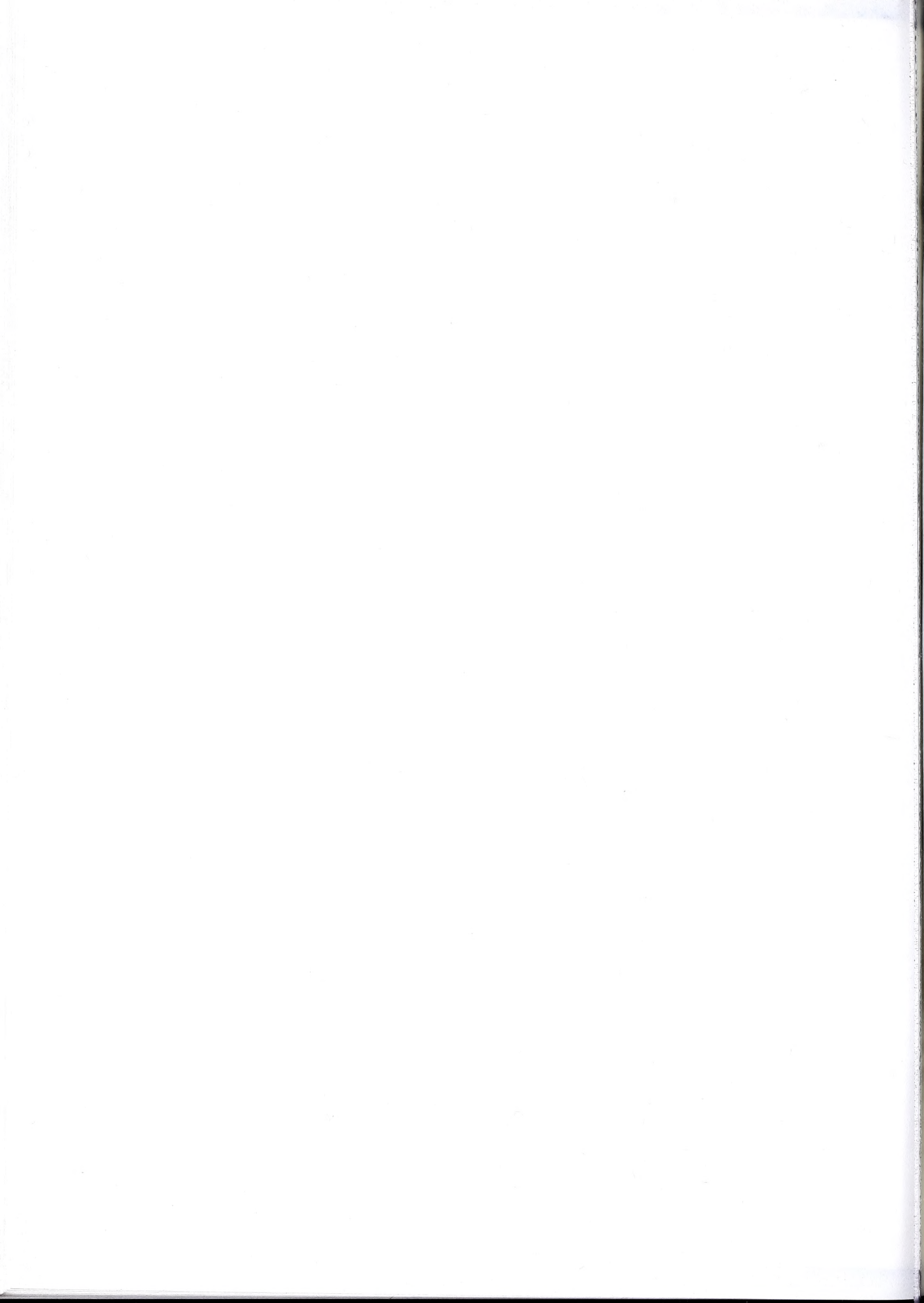
APPENDIX

PERSONAL DATA SHEETS

KNOWLEDGE INVENTORY

SEMANTIC DIFFERENTIAL RATING SCALES

CLIENT PREFERENCE RANK ORDER SCALE



PERSONAL DATA SHEET
Beginning Students
Prior to Graduate Education

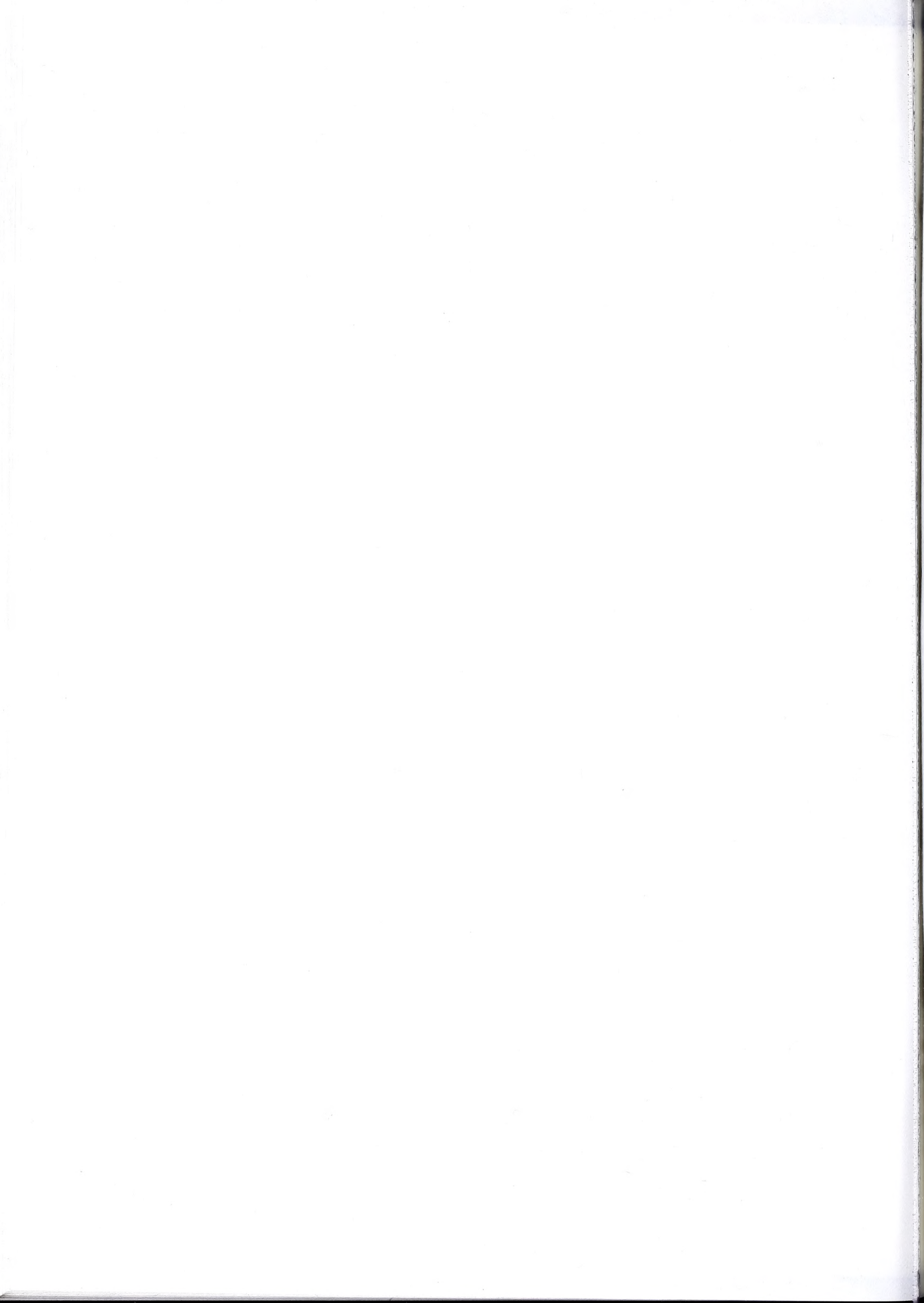
1. Age: Under 25 _____
25-35 _____
Over 35 _____
2. Sex M _____
F _____
3. Status: Married _____
Single _____
4. Children: Yes _____
No _____
5. Religion: Protestant _____
Catholic _____
Jewish _____
Other (specify) _____
6. Your eyesight is (with correction)
Normal _____
Severely impaired _____
Totally blind _____
7. Have you had any meaningful
experience with blind persons?
Yes _____ No _____
8. If yes, did it involve:
A member of your immediate
family _____
Relationship with a
neighbor _____
A close relative _____
A close friend _____
A passing acquaintance _____
9. Does that blind person live at
Home _____
Special boarding school _____
Other _____
10. Have you worked with the blind as
a volunteer or other capacity?
Yes _____ No _____
Specify _____
- Work Experience
11. Professional special educa-
tional experience:
None _____
Less than two years _____
2 - 5 years _____
Over 5 years _____
12. Number of blind pupils with
whom you have worked:
None _____
Under 5 _____
5 to 10 _____
Over 10 _____
13. List in order of preference
the types of handicapped
children you would like to
work with in your practice
teaching.
(1) _____
(2) _____
(3) _____
- Parental Data:
14. Father's occupation _____
15. Parent education:
Mother Father
Less than 12 yrs _____
12 years _____
13 to 16 years _____
17 years or more _____
16. Parent income:
Under \$7,500 _____
\$7500 - \$10,000 _____
\$10,000 - \$15,000 _____
\$15,000 - \$20,000 _____
Over \$20,000 _____



KNOWLEDGE INVENTORY SCORE SHEET

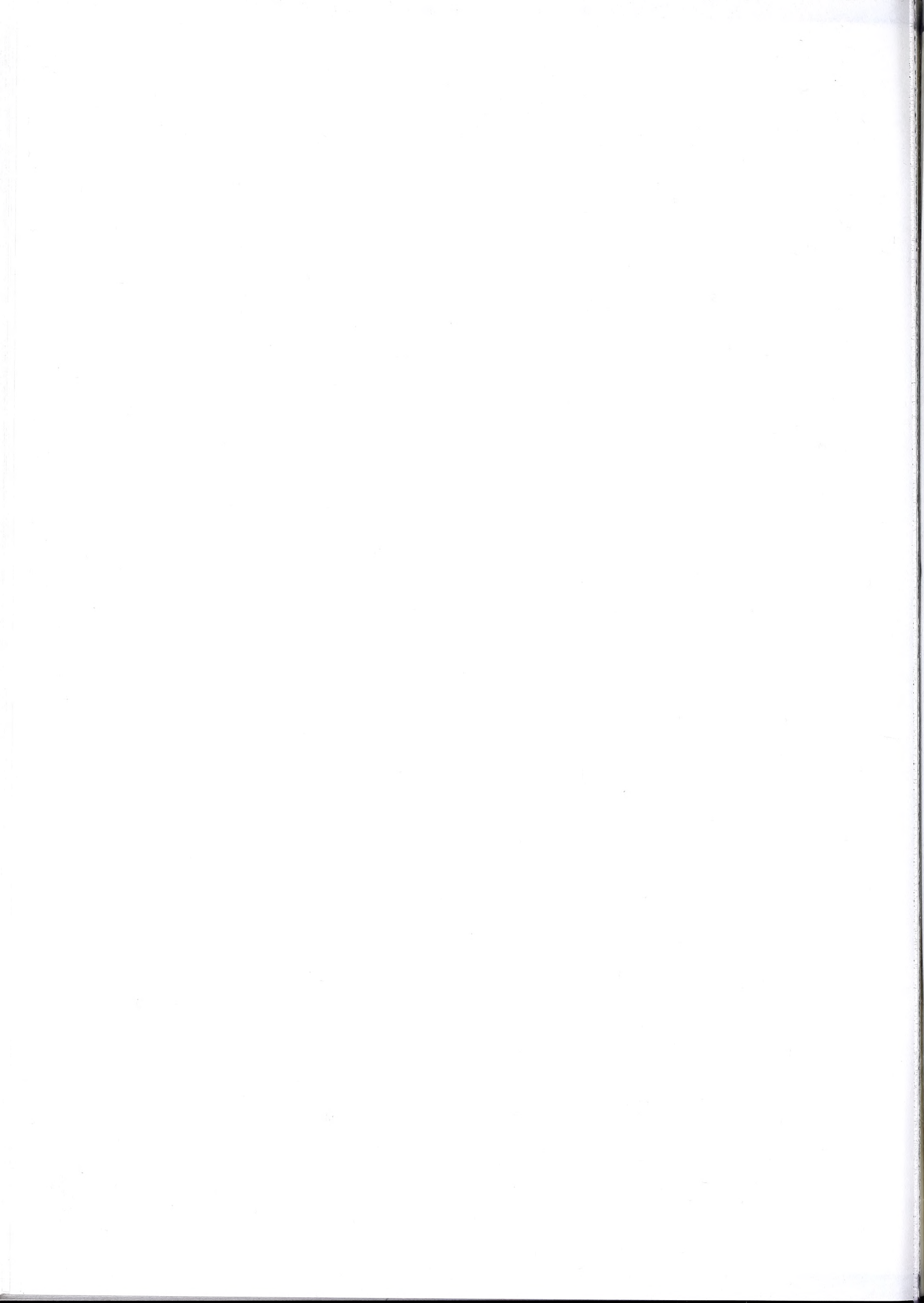
Mark with X

	A	B	C	D		A	B	C	D
1.	_____	_____	_____	_____	26.	_____	_____	_____	_____
2.	_____	_____	_____	_____	27.	_____	_____	_____	_____
3.	_____	_____	_____	_____	28.	_____	_____	_____	_____
4.	_____	_____	_____	_____	29.	_____	_____	_____	_____
5.	_____	_____	_____	_____	30.	_____	_____	_____	_____
6.	_____	_____	_____	_____	31.	_____	_____	_____	_____
7.	_____	_____	_____	_____	32.	_____	_____	_____	_____
8.	_____	_____	_____	_____	33.	_____	_____	_____	_____
9.	_____	_____	_____	_____	34.	_____	_____	_____	_____
10.	_____	_____	_____	_____	35.	_____	_____	_____	_____
11.	_____	_____	_____	_____	36.	_____	_____	_____	_____
12.	_____	_____	_____	_____	37.	_____	_____	_____	_____
13.	_____	_____	_____	_____	38.	_____	_____	_____	_____
14.	_____	_____	_____	_____	39.	_____	_____	_____	_____
15.	_____	_____	_____	_____	40.	_____	_____	_____	_____
16.	_____	_____	_____	_____	41.	_____	_____	_____	_____
17.	_____	_____	_____	_____	42.	_____	_____	_____	_____
18.	_____	_____	_____	_____	43.	_____	_____	_____	_____
19.	_____	_____	_____	_____	44.	_____	_____	_____	_____
20.	_____	_____	_____	_____	45.	_____	_____	_____	_____
21.	_____	_____	_____	_____	46.	_____	_____	_____	_____
22.	_____	_____	_____	_____	47.	_____	_____	_____	_____
23.	_____	_____	_____	_____	48.	_____	_____	_____	_____
24.	_____	_____	_____	_____	49.	_____	_____	_____	_____
25.	_____	_____	_____	_____	50.	_____	_____	_____	_____

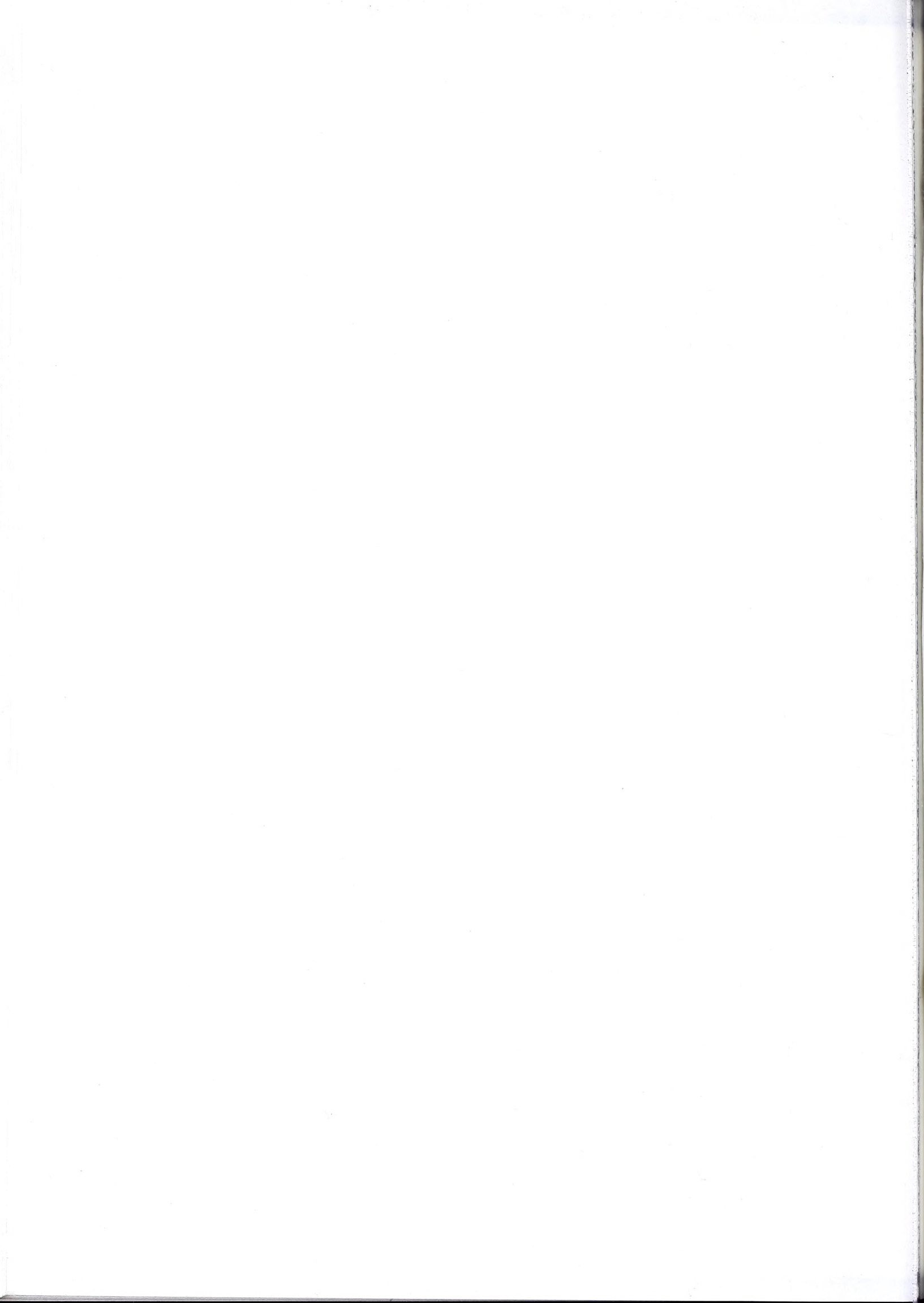


GENERAL KNOWLEDGE INVENTORY

1. In general, which of the following tend to have more favorable attitudes toward the visually impaired:
 - (a) males
 - (b) females
 - (c) both in equal proportion
 - (d) no information available in this area.
2. The mode of travel that would promote the most independence:
 - (a) cane
 - (b) dog
 - (c) other person
 - (d) other
3. Special eye exercises intended to make the eye straight are termed:
 - (a) optometrics
 - (b) odontics
 - (c) orthoptics
 - (d) orthalamics
4. A report adopted by the Section on Ophthalmology of the American Medical Association defined visual efficiency as:
 - (a) corrected visual acuity at distance and near
 - (b) ocular motility with absence of double vision
 - (c) binocular vision
 - (d) all of the above
5. It is the function of the nurse, the social worker or the teacher to:
 - (a) diagnose visual problems
 - (b) recognize visual problems
 - (c) both a and b
 - (d) their job functions lie in other areas
6. What approximate percent of the academic work a child does in school is built around close visual activity:
 - (a) 95%
 - (b) 80%
 - (c) 60%
 - (d) 40%
7. The ability to see is affected by:
 - (a) general physical health
 - (b) emotional and mental health
 - (c) both a and b
 - (d) none of the above

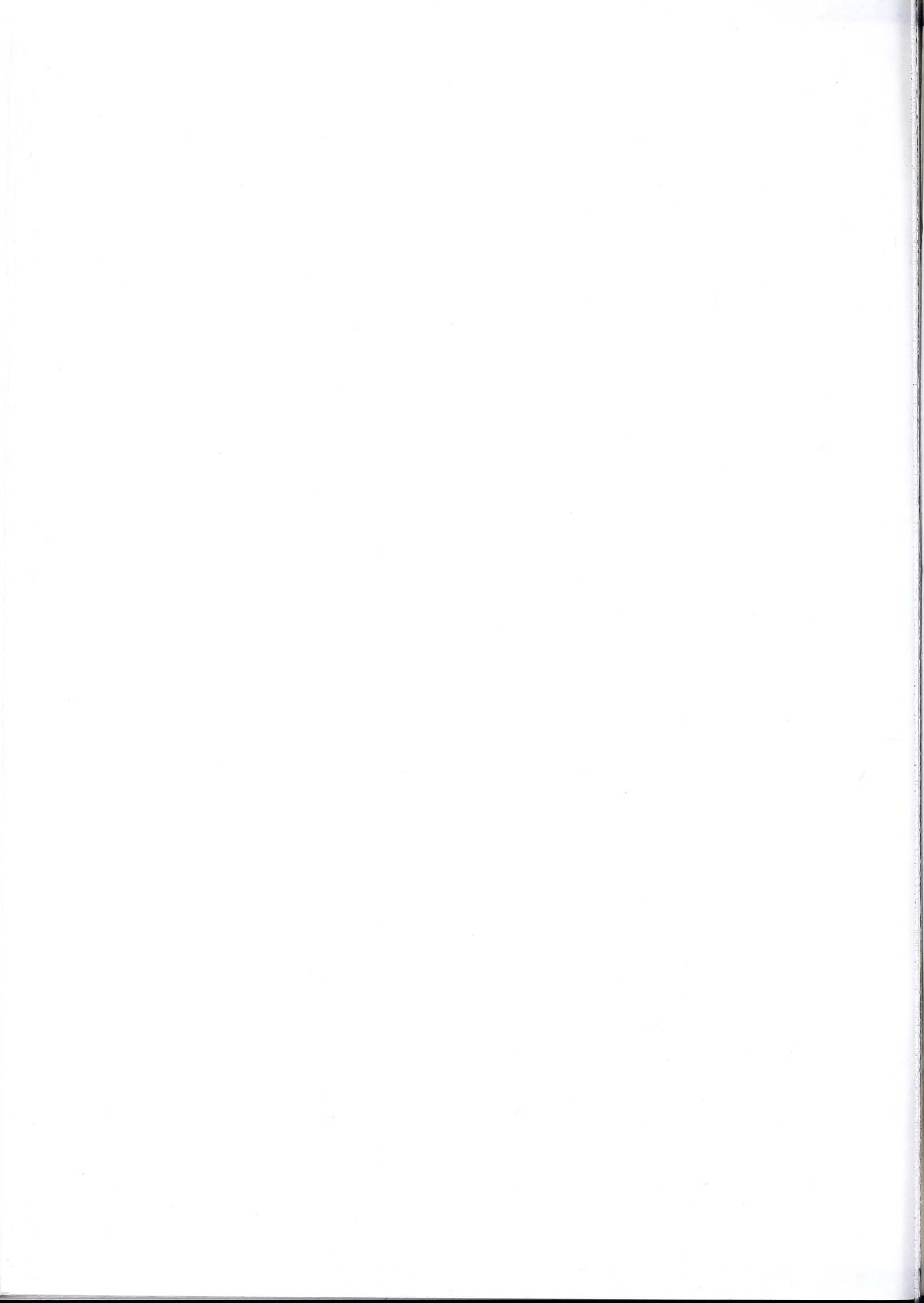


8. The particular visual condition especially found in older people is:
 - (a) hyperopia
 - (b) myopia
 - (c) diplopia
 - (d) all of the above
9. The highest function of the two eyes is:
 - (a) peripheral vision
 - (b) residual vision
 - (c) stereoscopic vision
 - (d) binocular vision
10. Which of the following situations is considered the best for optimum development of a legally blind child's capabilities and growth:
 - (a) in schools for the blind, also serving the legally blind
 - (b) in special schools for the handicapped where "sight saving" classes are an integral part of the school make-up
 - (c) in special classes in public schools with practically all activity in one special classroom
 - (d) as part of a regular public school system, attending a special classroom for special eye work.
11. The itinerant teacher plan basically involves:
 - (a) a plan whereby the child is enrolled in the regular grade with the itinerant teacher bringing help to the child, without transference to another school
 - (b) a plan whereby the teacher individually becomes a full-time tutor
 - (c) a plan whereby the regular teacher circulates around the classroom helping the partially seeing child particularly
 - (d) there is much discussion on this but no conclusion
12. The proportion of partially seeing children (visual acuity of 20/200 or less) among the school-age population is:
 - (a) 2 per 1,000
 - (b) 14 per 1,000
 - (c) 25 per 1,000
 - (d) 40 per 1,000
13. The belief that the frequent use of the eyes will aggravate a pre-existing ocular defect is:
 - (a) a matter of clinical opinion, not fact
 - (b) true
 - (c) fallacious
 - (d) not enough research for a statement
14. A person considered legally blind:
 - (a) will generally suffer from educational, social, and vocational performance deficiencies
 - (b) will not be any more adversely affected than the general population
 - (c) will be less subject to these performance deficiencies
 - (d) comparisons along the lines of performance are not valid

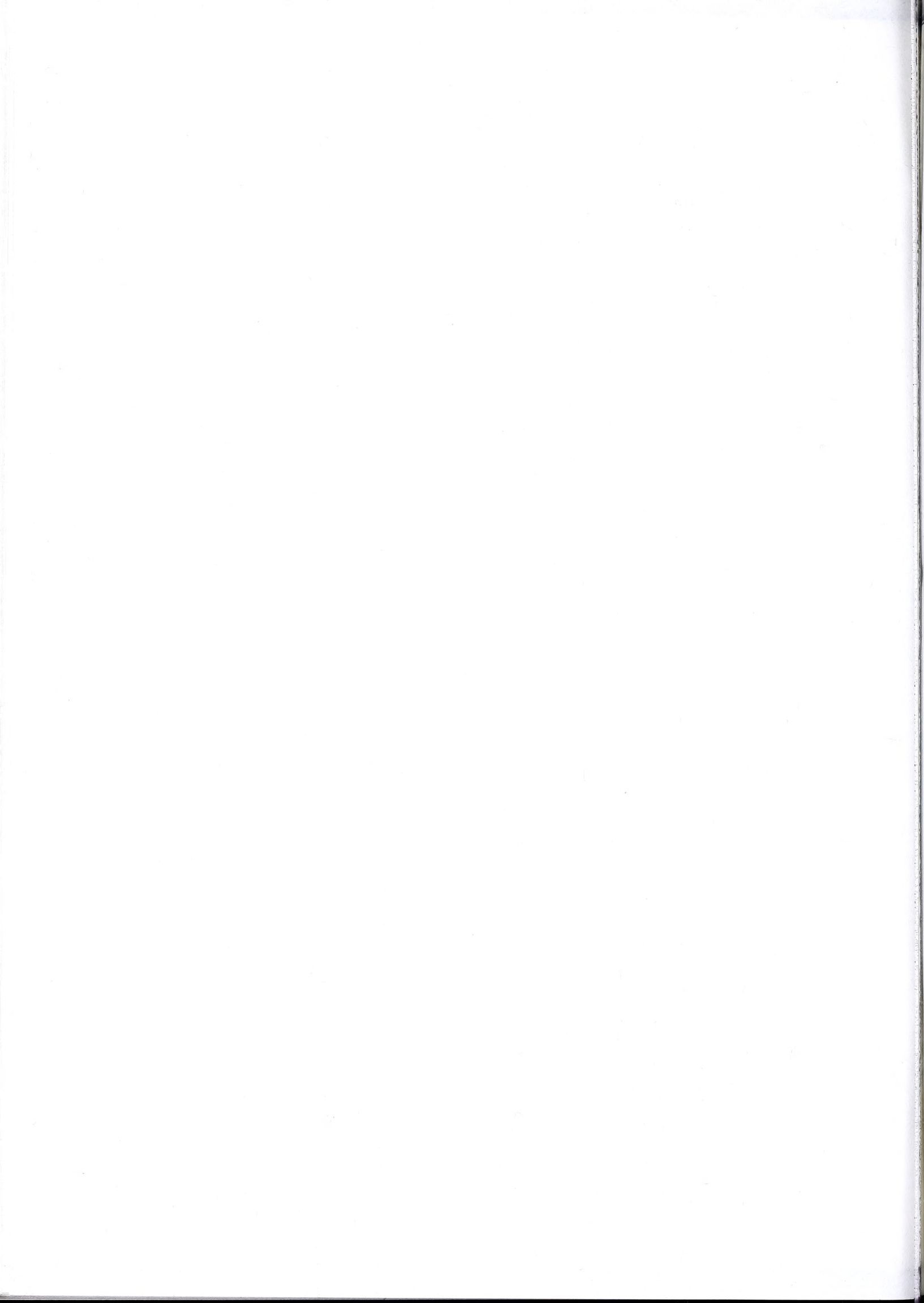


15. Legally blind children, in comparison with normally seeing children score on intellectual tests
 - (a) generally higher in intellectual capacities
 - (b) generally lower in intellectual capacities
 - (c) generally the same in intellectual capacities
 - (d) no information on the above
16. It has been recognized that the techniques used in teaching normally seeing children:
 - (a) are not applicable for the legally blind
 - (b) are applicable for the legally blind
 - (c) must be modified for the legally blind
 - (d) impact is significantly different
17. Of the following, which characteristic is seen frequently in legally blind children:
 - (a) determination
 - (b) withdrawal
 - (c) resentment
 - (d) all of these
18. Which of the following statements best describes partially sighted children:
 - (a) most can use their eyes for anything which they can see without causing undue strain
 - (b) the eyes should be used as little as possible due to severe eyestrain even with normal use
 - (c) eyestrain in the legally blind has not been sufficiently studied to make a statement
 - (d) eyestrain is a common medical problem in the legally blind
19. Institutional living is preferable for most legally blind persons because:
 - (a) more comfortable for the legally blind in an environment with others similarly handicapped
 - (b) tailored environment for their specific needs
 - (c) preparation for independent living by special training
 - (d) none of the above true
20. Legislation should be directed primarily toward:
 - (a) protecting the legally blind person
 - (b) to promote independence
 - (c) no different than the general population
 - (d) attitudes of sympathy
21. Regarding hazardous industrial employment, the legally blind should be:
 - (a) kept out of such employment
 - (b) placed the same as sighted persons
 - (c) placed on the job with special instruction
 - (d) placed in such position only if provided special protection

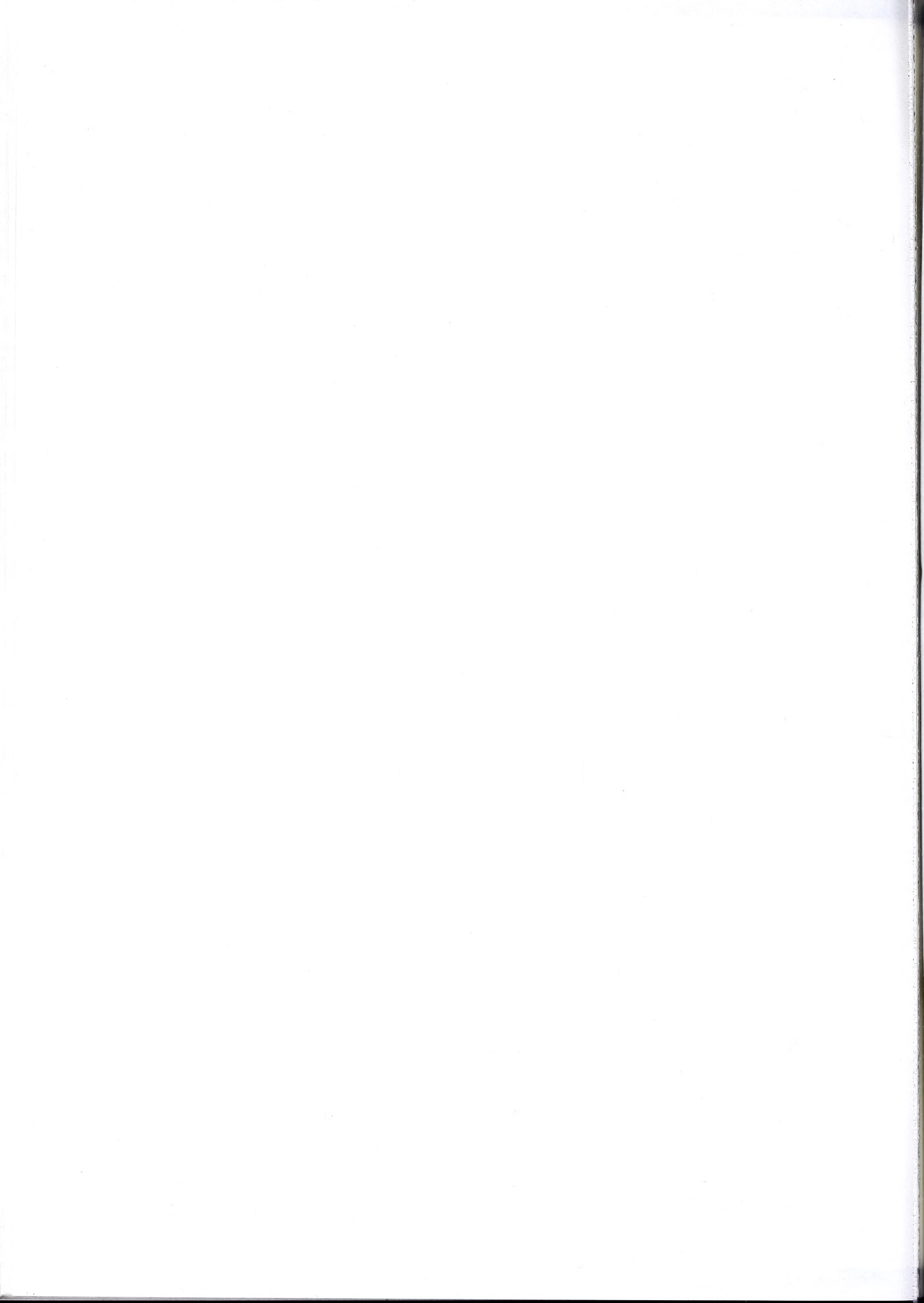
22. Legally blind persons react to unpleasant situations by:
- (a) withdrawing
 - (b) aggressiveness
 - (c) adaptation
 - (d) same as anyone else
23. Under what conditions does legal blindness seem to bring the most problems to adjustment:
- (a) congenital
 - (b) gradual onset
 - (c) sudden onset
 - (d) the same for all conditions
24. Industrial accidents involve the legally blind:
- (a) three times as much as sighted people
 - (b) equal with sighted people
 - (c) less than sighted people
 - (d) none of the above
25. Most legally blind persons come from:
- (a) the highest socio-economic levels
 - (b) the middle socio-economic levels
 - (c) the lower socio-economic levels
 - (d) all socio-economic levels, somewhat randomly distributed
26. The structure of group activities for legally blind children:
- (a) should employ the same play activities as with normal children
 - (b) should rely largely on interaction between the group leader and the legally blind on a one-to-one level
 - (c) should guard against experiences of repeated failure
 - (d) should be highly permissive and unstructured
27. Where do most legally blind children obtain their education:
- (a) institutional schools
 - (b) public schools
 - (c) personal tutoring schools
 - (d) other
28. The incidence of emotional disturbances among the legally blind is:
- (a) considerably higher than in the general population
 - (b) less than in the general population
 - (c) equal to the general population
 - (d) no research available in this area
29. Legal blindness (20/200 or less) in contrast to total blindness is first recognized by:
- (a) physicians
 - (b) parents
 - (c) teachers
 - (d) peers



30. Which of the following is common to most legally blind children of preschool age?
- (a) presence of physical stigmata
 - (b) slowness in language development
 - (c) slowness in walking
 - (d) problems in adjusting to family expectations
31. The factor most responsible for the poor mental health of some legally blind persons is:
- (a) low intelligence
 - (b) lack of adequate schooling
 - (c) lack of self-acceptance
 - (d) limited earning capacity
32. A legally blind person's feelings of inferiority are derived from:
- (a) chronic frustration and failure
 - (b) standards and expectations of the community
 - (c) comparisons of self with others
 - (d) all of the above
33. Successful adult adjustment of the legally blind is related most positively to:
- (a) the individual's attitude toward school
 - (b) interpersonal and social skills
 - (c) reading skills and I.Q.
 - (d) work performance
34. An important principle in working with the legally blind is that:
- (a) intelligence is fixed at birth
 - (b) the environment needs to be tailored to their limitations
 - (c) they can learn as well as other people
 - (d) failure stimulates them to try harder
35. Which of the following parents might be expected to encounter the most difficulty in emotionally accepting a legally blind child:
- (a) the socially disadvantaged parent
 - (b) the professional or college graduate parent
 - (c) the unskilled laborer of limited education
 - (d) all would have equal difficulty
36. In extending help to parents of legally blinded children, one should be guided by the principle:
- (a) the people cannot be helped unless they seek help of their own volition
 - (b) that these families will recognize their child's limitation and seek appropriate services
 - (c) that unless aggressive reaching-out efforts are made to contact them, they tend to remain social isolates
 - (d) that they distrust community representatives and must be approached authoritatively



37. Psychotherapeutic approaches with the legally blind:
- (a) should not be undertaken since the blind cannot profit from these techniques
 - (b) are no different than with normally sighted persons
 - (c) often requires a more active role by the therapist in the problem-solving process
 - (d) require a completely unique technique geared to the individual's blindness
38. Approximately which of the following amounts of all new blindness are attributed to senile degeneration in the United States:
- (a) 1/10
 - (b) 1/3
 - (c) 2/3
 - (d) 3/4
39. The over-all incidence rate for blindness is:
- (a) higher among men than women
 - (b) equal
 - (c) higher among women than men
 - (d) no estimate
40. For children under 5 years of age the major cause of blindness is:
- (a) uveitis
 - (b) glaucoma
 - (c) retrolental fibroplasia
 - (d) cataract
41. Both male and female blindness rates:
- (a) decreases steadily from the lowest age group to the highest
 - (b) stays the same
 - (c) increases steadily from the lowest age group to the highest
 - (d) varies greatly according to unknown factors
42. Comparative rates on blindness among whites and non-whites indicate that it is:
- (a) higher among whites
 - (b) higher among non-whites
 - (c) no relation
 - (d) equivalent
43. What percent of new additions to blindness registers in the United States are 65 years or older:
- (a) between 50% and 75%
 - (b) between 75% and 100%
 - (c) between 25% and 50%
 - (d) between 10% and 25%



44. All blind can be identified by:
(a) State Registers
(b) Federal Census Material
(c) National Association for the Blind
(d) none of the above
45. Individuals who are legally blind are unable to perform which of the following jobs:
(a) drill press operator
(b) farming
(c) teaching
(d) none of the above
46. In most jobs in which the blind are involved:
(a) light perception is an absolute necessity
(b) light perception is generally not needed
(c) lack of light perception keeps a blind person from getting the job
(d) none of the above
47. The truest statement is:
(a) there are more monocular blind than binocular blind
(b) monocular blindness affects employment more than binocular
(c) there are equal numbers of monocular and binocular blind persons
(d) there is no reliable information on the distribution of these disorders
48. Estimates of prevalence of legal (economic) blindness as shown by blindness registers are about:
(a) 0.2 per thousand of the general population
(b) 2.0 per thousand of the general population
(c) 20.0 per thousand of the general population
(d) 200.0 per thousand of the general population
49. Estimates of incidence (new cases per year) of legal (economic) blindness, as shown by blindness registers are about:
(a) 0.2 per thousand of the general population
(b) 2.0 per thousand of the general population
(c) 20.0 per thousand of the general population
(d) 200.0 per thousand of the general population
50. Statistics from one country to another are not comparable because of variations in:
(a) definition of blindness
(b) mode of acquisition
(c) extent of population covered
(d) all of the above

INSTRUCTIONS

SCALES FOR DIFFERENTIAL MEANING

THE PURPOSE OF THE FOLLOWING PAGES IS TO MEASURE THE MEANINGS THE DIFFERENT CONCEPTS AT THE TOP OF EACH PAGE HAVE FOR YOU. EACH CONCEPT IS TO BE RATED ON THE DESCRIPTIONS BELOW IT. RATE THE CONCEPT ON EACH OF THESE SCALES AS FOLLOWS:

If you feel the concept at the top of the page is very closely related to one end of the scale you should place your checkmark as follows:

good X _____ _____ _____ _____ _____ bad

good _____ _____ _____ or _____ _____ X bad

If you feel the concept is closely related to either end of the scale (but not extremely), place your checkmark as follows:

valuable _____ X _____ _____ _____ _____ worthless

valuable _____ _____ _____ or _____ X _____ worthless

If the concept is slightly related to either end, but not neutral, check as follows:

active _____ _____ X _____ _____ _____ passive

active _____ _____ _____ or X _____ _____ passive

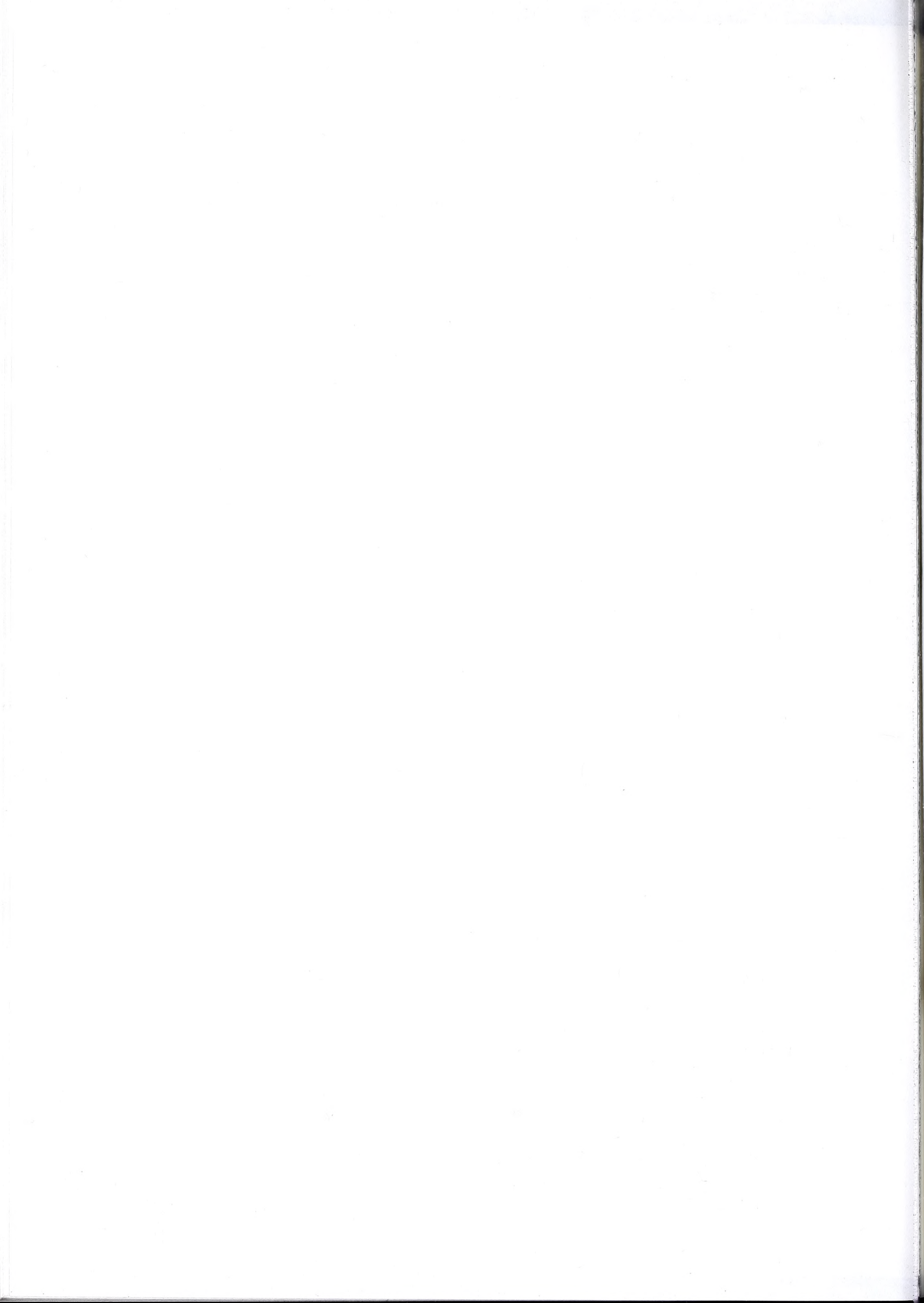
If you consider the concept to be neutral, both sides equally associated, or if the scale is completely irrelevant to the concept, place your checkmarks in the middle space.

Be sure your marks are in the middle of the selected space.

Be sure you check every descriptive scale for every concept.

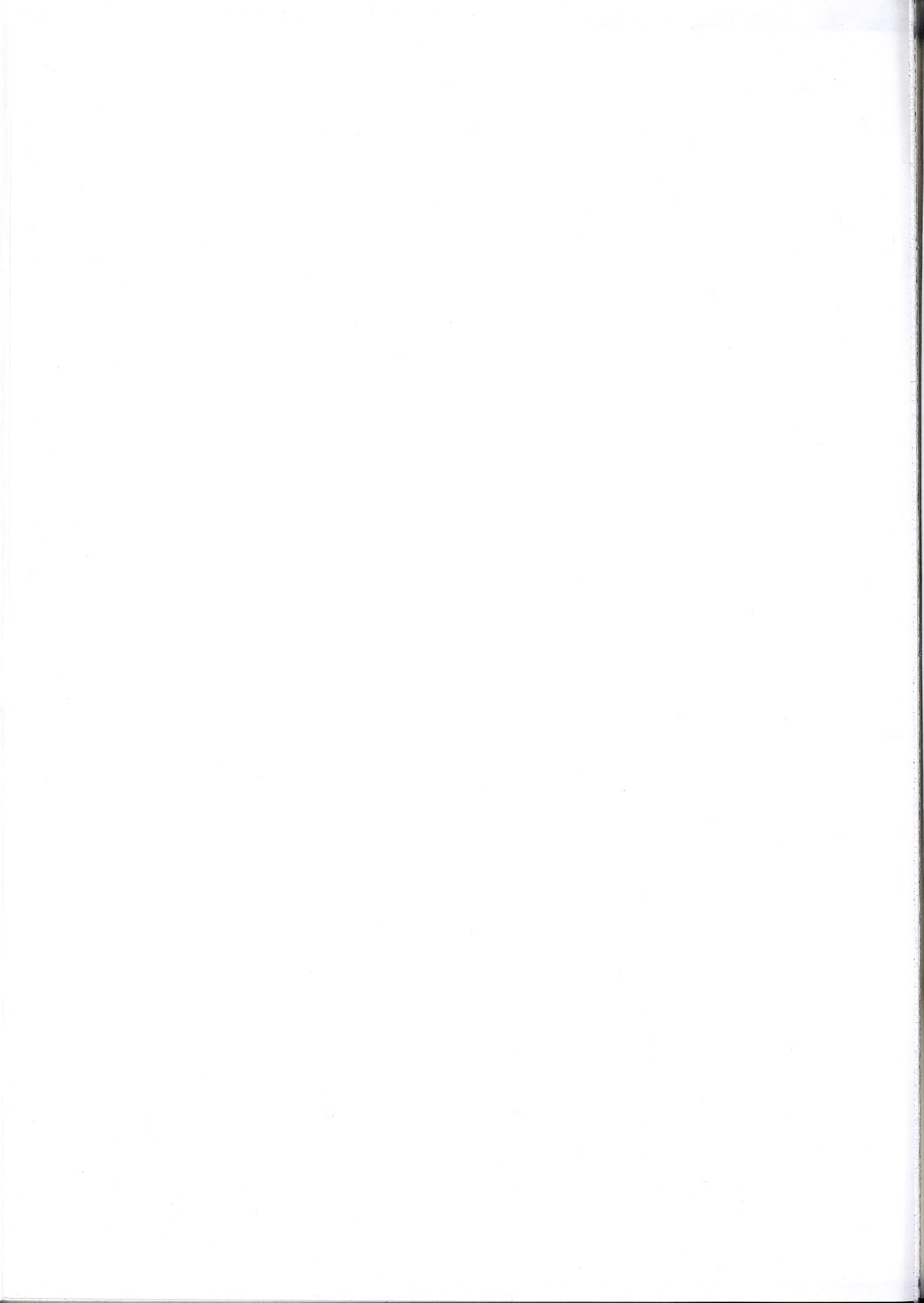
Do not omit any.

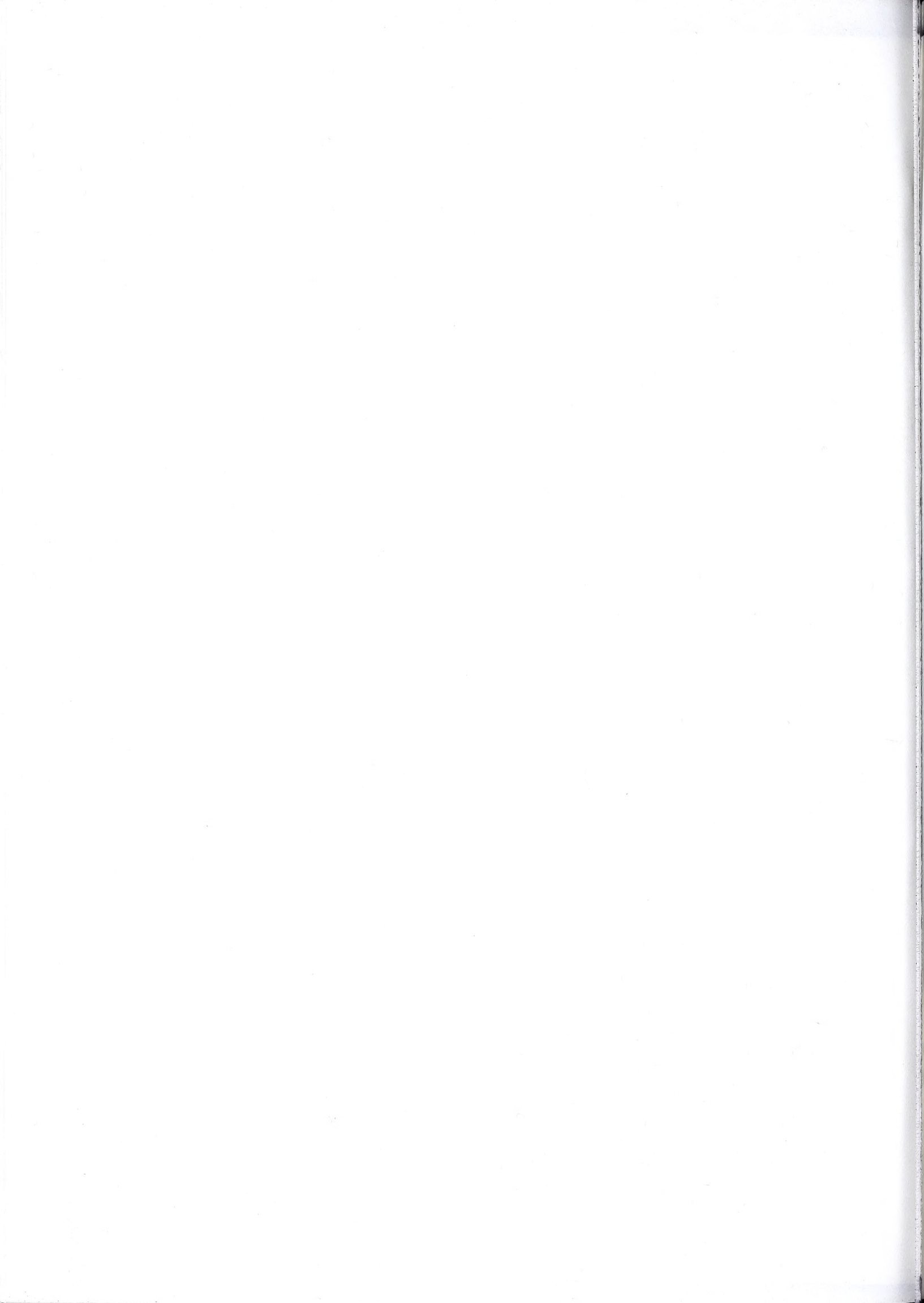
Never put more than one checkmark on a single scale. Sometimes you may feel as though you have checked the same item before on the scale, but this will not be the case. Do not look back and forth through the items. Do not try to remember how you checked a similar description for a different concept. Make each item a separate and independent judgment. Do not worry or puzzle over individual items. It is your first impression, your "feelings" about the concept that we want. Do not be careless, however. We want true impressions.



I. MENTALLY RETARDED

1. useful	—	—	—	—	—	—	useless
2. valuable	—	—	—	—	—	—	worthless
3. good	—	—	—	—	—	—	bad
4. easy to get along with	—	—	—	—	—	—	hard to get along with
5. beautiful	—	—	—	—	—	—	ugly
6. healthy	—	—	—	—	—	—	sick
7. kind	—	—	—	—	—	—	cruel
8. deep	—	—	—	—	—	—	shallow
9. strong	—	—	—	—	—	—	weak
10. clean	—	—	—	—	—	—	dirty
11. calm	—	—	—	—	—	—	emotional
12. active	—	—	—	—	—	—	passive
13. motivated	—	—	—	—	—	—	aimless
14. predictable	—	—	—	—	—	—	unpredictable
15. happy	—	—	—	—	—	—	sad
16. neat	—	—	—	—	—	—	untidy
17. self-reliant	—	—	—	—	—	—	dependent
18. intelligent	—	—	—	—	—	—	not intel- tigent
19. reliable	—	—	—	—	—	—	unreliable
20. not dangerous	—	—	—	—	—	—	dangerous





PUPIL PREFERENCE RANK ORDER SCALE

Beginning Students

PLEASE RANK THE FOLLOWING PUPIL GROUPS FROM 1 - 7 ACCORDING TO YOUR WORK PREFERENCES, RANKING AS NUMBER ONE THE GROUP YOU WOULD MOST PREFER TO WORK WITH, AND NUMBER SEVEN, THE LEAST PREFERRED GROUP.

_____	Mentally Retarded
_____	Blind
_____	Emotionally Disturbed
_____	Speech Impairment
_____	Deaf
_____	Gifted
_____	Cerebral Palsy

PUPIL PREFERENCE RANK ORDER SCALE

Graduating Students

PLEASE RANK THE FOLLOWING PUPIL GROUPS FROM 1 TO 7 ACCORDING TO YOUR WORK PREFERENCES, RANKING AS NUMBER ONE THE GROUP YOU WOULD MOST PREFER TO WORK WITH, AND NUMBER SEVEN THE LEAST PREFERRED GROUP.

_____	Mentally Retarded
_____	Blind
_____	Emotionally Disturbed
_____	Speech Impairment
_____	Deaf
_____	Gifted
_____	Cerebral Palsy

- a. Looking back to the beginning of your graduate education, would you have ranked the blind differently than shown above?

Yes _____ No _____

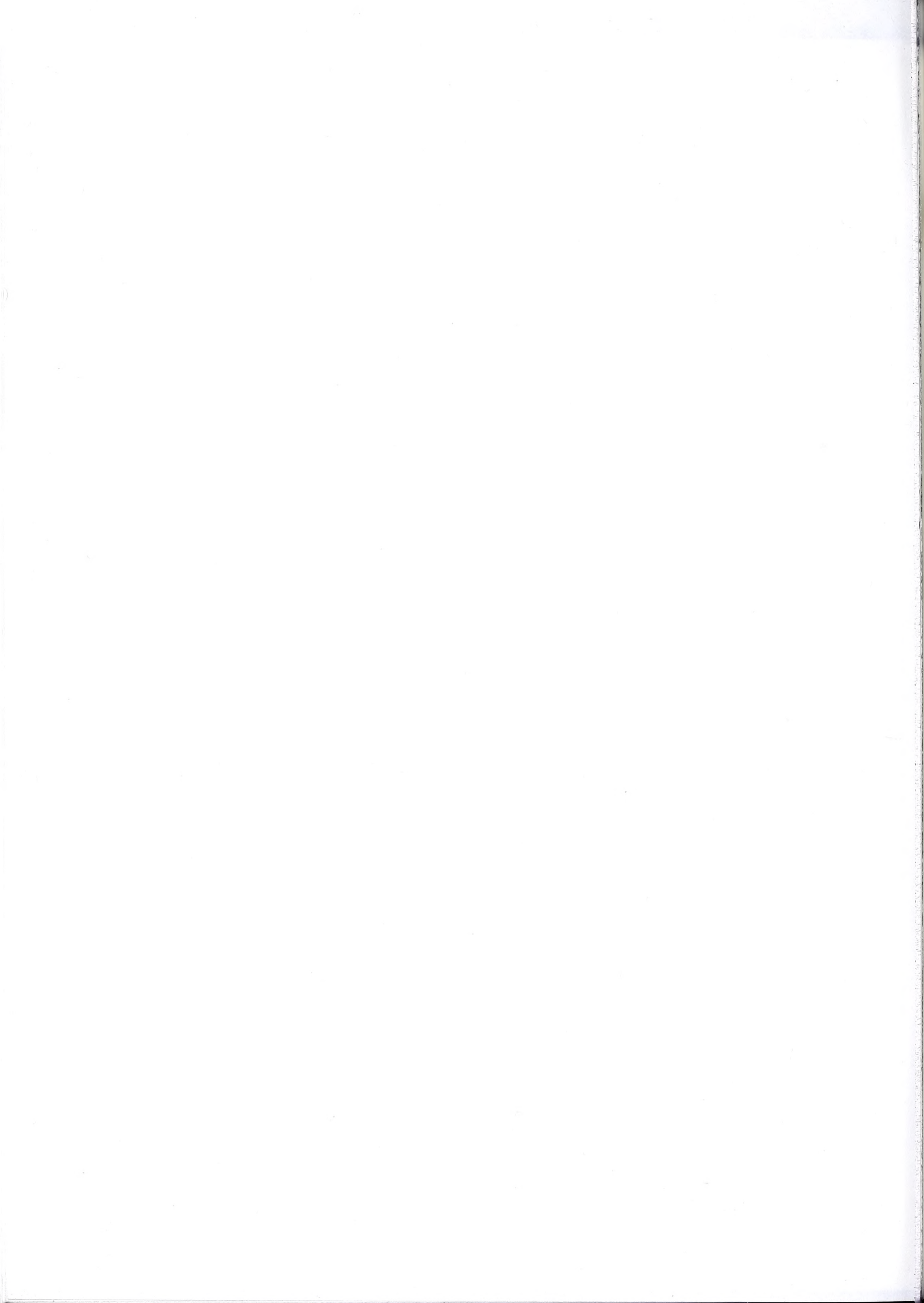
If yes, where would you rank them now? _____

- b. What rank order number would you have assigned? _____

- c. If a change has occurred, what factors do you believe have influenced you?

Remarks:

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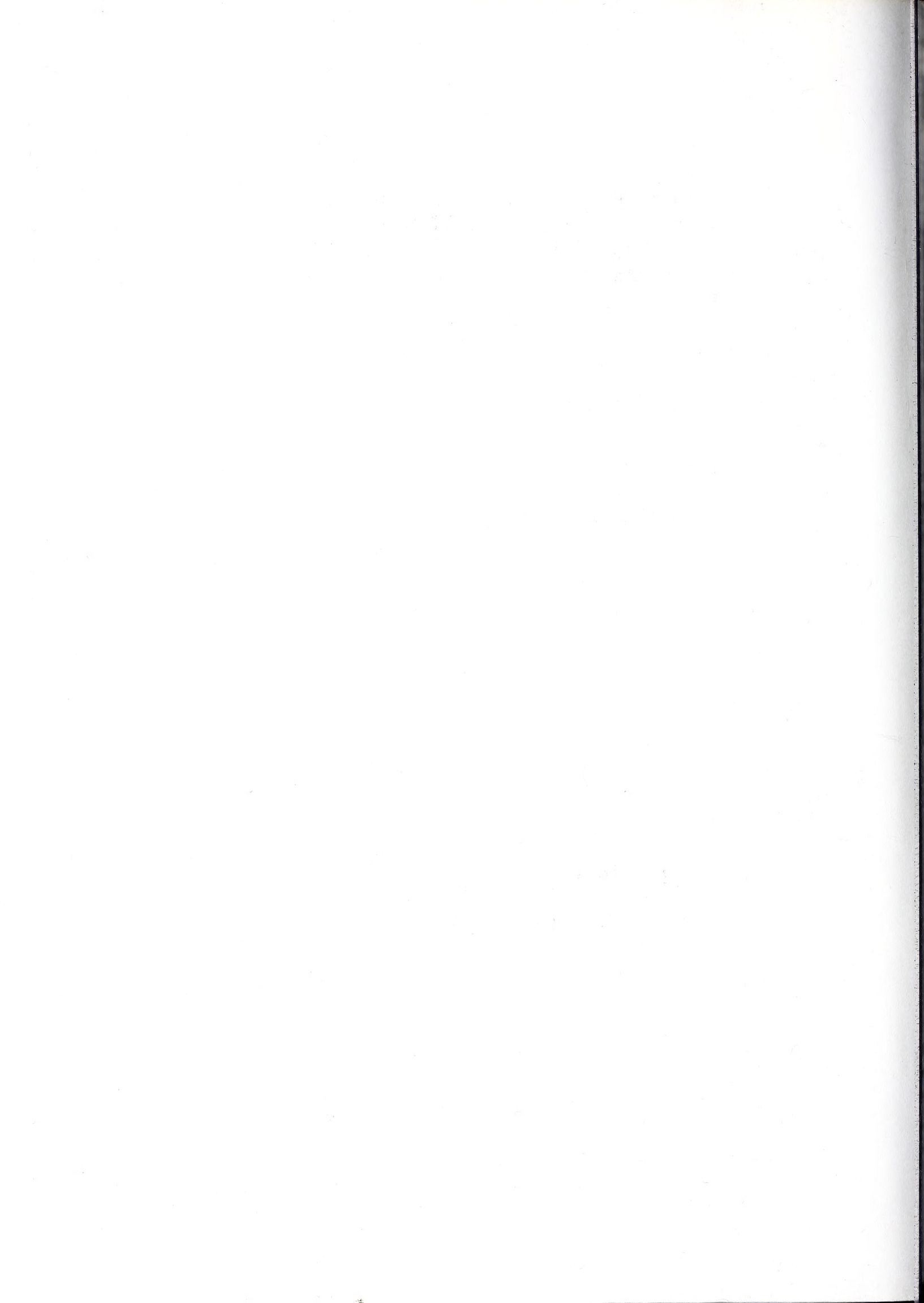
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